# Technical Memorandum

# Phase 3 Chemical Data Gap Investigation Sampling Results Go-Backs, Trenches and Soil Vapor Locations Santa Susana Field Laboratory Ventura County, California

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# Technical Memorandum

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# Acronyms and Abbreviations

| | |
|---|---|
| % | percent |
| %D | percent difference/percent drift |
| %R | percent recovery |
| mg/kg | milligram per kilogram |
| mg/L | milligram per liter |
| ng/kg | nanogram per kilogram |
| pg/L | picogram per liter |
| µg/kg | microgram per kilogram |
| µg/L | microgram per liter |
| < | less than |
| AOC | Administrative Order on Consent |
| AST | above-ground storage tank |
| ASTM | ASTM International Type II |
| bgs | below ground surface |
| BHC | benzene hexachloride |
| CAS | chemical abstract number |
| CDD | chlorinated dibenzo-p-dioxins |
| CDF | chlorinated dibenzofurans |
| CDM Smith | CDM Federal Programs Corporation |
| CoC | chain-of-custody |
| Cr(VI) | hexavalent chromium |
| DOE | Department of Energy |
| DPT | direct push technology |
| DQI | data quality indicator |
| DQO | data quality objective |
| DTSC | Department of Toxic Substances Control |
| DUAR | data usability assessment review |
| EFH | extractable fuel hydrocarbon |
| EMPC | estimated maximum possible concentration |
| EPA | U.S. Environmental Protection Agency |
| ESA | Ecological Sensitive Area |
| FSDF | Former Sodium Disposal Facility |
| FSDS | field sample data sheet |
| FSP | field sampling plan |
| ft | feet |
| FTL | field team leader |
| GIS | geographic information system |
| GPS | global positioning system |
| GRO | gasoline range organics |
| HSA | Historical Site Assessment |
| HpCDF | heptachlorodibenzofuran |
| HxCDF | hexachlorodibenzofuran |
| ICP | inductively coupled plasma |
| ID | identifier |

| | |
|---|---|
| ISF | interim storage facility |
| ISL | interim screening level |
| J | estimated |
| LCS | laboratory control sample |
| LCSD | laboratory control sample duplicate |
| LL | Eurofins Lancaster Laboratories |
| Master FSP | Master Field Sampling Plan |
| MCPA | 2-methyl-4-chlorophenoxyacetic acid |
| MCPP | methylchlorophenoxypropionic acid |
| MDL | method detection limit |
| MS | matrix spike |
| MSD | matrix spike duplicate |
| MWH | MWH Americas, Inc. |
| NBZ | Northern Buffer Zone |
| ND | nondetect |
| NW | northwest |
| OCDD | octachlorodibenzodioxin |
| OCDF | octachlorodibenzofuran |
| OSWER | Office of Solid Waste and Emergency Response |
| PAH | polycyclic aromatic hydrocarbon |
| PARCCS | precision, accuracy, representativeness, comparability, completeness and sensitivity |
| PCB | polychlorinated biphenyl |
| PCT | polychlorinated triphenyl |
| PeCDF | pentachlorodibenzofuran |
| PID | photoionization detector |
| QA | quality assurance |
| QAPP | quality assurance project plan |
| QC | quality control |
| RCRA | Resource Conservation and Recovery Act |
| RFI | Facility Investigation Reports |
| RL | reporting limit |
| RMHF | Radioactive Material Handling Facility |
| RPD | relative percent difference |
| SDG | sample delivery group |
| SE | southeast |
| SIM | selective ion monitoring |
| SNAP | Streamlined New Acquisition Process |
| SOP | standard operating procedure |
| SOW | statement of work |
| SRE | Sodium Reactor Experiment |
| SSFL | Santa Susana Field Laboratory |
| SVOC | semivolatile organic compound |
| TCDD | 2,3,7,8-tetrachlorodibenzo-p-dioxin |
| TEQ | toxicity equivalence |
| TEF | toxicity equivalence factor |
| TM | technical memorandum |

| | |
|---|---|
| TPH | total petroleum hydrocarbon |
| U | nondetect |
| UJ | estimated nondetect |
| VOC | volatile organic compound |
| 2,4,5-T | 2,4,5-trichlorophenoxyacetic acid |
| 2,4-D | 2,4-dichlorophenoxyacetic acid |
| 2,4-DB | 2,4-dichlorophenoxy butyric acid |

# Section 1
# Introduction

This Technical Memorandum (TM) presents the results of chemical analyses of surface and subsurface soil samples collected between January and June 2014 from Phase 3 soil borings for Go-Backs, Trenches and Soil Vapor Locations at the Santa Susana Field Laboratory (SSFL) site in Ventura County, California. This work was performed under eight planning documents:

- *Master Field Sampling Plan for Chemical Data Gap Investigation Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Federal Programs Corporation [CDM Smith] 2012a) (Master Field Sampling Plan [FSP])
- *Addendum No. 10 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Go-Back Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subareas 5B,5C and 3/6* (CDM Smith 2014) (Addendum to the Master FSP)
- *Addendum No. 11 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Go-Back Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California, Subareas 5A, 5D, 8 and Northern Buffer Zone (*CDM Smith 2014) (Addendum to the Master FSP)
- *Addendum No. 12 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Soil Vapor Implementation for Area IV, Santa Susana Field Laboratory* (MWH Americas, Inc. 2014a) (Addendum to the Master FSP)
- *Final Phase 3 Data Gap Analysis for Subareas 5B, 5C, 3/6, and 7 Technical Memorandum, Santa Susana Field Laboratory, Ventura County*, (MWH Americas, Inc. 2013)
- *Final Phase 3 Data Gap Analysis for Subareas 5A, 5D, and 8 and Northern Buffer Zone Technical Memorandum, Santa Susana Field Laboratory, Ventura County,* (MWH Americas, Inc. 2014)
- *Technical Memorandum Summary of Phase 3 Trench Investigation Activities in Area IV, Santa Susana Field Laboratory, Ventura County* (MWH September 2014)
- *Phase 3 Subarea 5A North Implementation Plan, Santa Susana Field Laboratory* (United States Department of Energy [DOE] 2013)

The Master FSP (CDM Smith 2012a) is Appendix A of the *Work Plan for Chemical Data Gap Investigation, Phase 3 Soil Chemical Sampling at Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2012c), which also includes Appendix B, Quality Assurance Project Plan (QAPP), Appendix C, Worker Safety and Health Program, and Appendix D, Standard Operating Procedures (SOPs).

The Implementation Plan (DOE 2013) referenced above supplements the Subarea 5A Data Gap Analysis TM that was submitted as Attachment 1 in Addendum Number 4 to the Master FSP (CDM Smith 2012b). The Implementation Plan (DOE 2013) provided a re-evaluation of total sampling needs

for Subarea 5A deferring sampling decisions until the "Go-Back" [1] assessment was completed. Based on that assessment some locations were determined no longer necessary or were deferred to the remedial planning stage. For those locations sampled, they are reported in this TM.

This TM also provides a description of the sampling activities and a discussion of the analytical data review findings for Phase 3 sampling for Go-Backs, Trenches and Soil Vapor Locations. The TM does not provide an interpretation of the results. The data provided in this TM are intended to be combined with data collected under the prior Resource Conversation and Recovery Act (RCRA) Facility Investigation and the chemical collocated sampling program (Phase 1 sampling) to support the Soil Remedial Action Implementation Plan for chemicals in soil in Area IV. The collocated sampling program was Phase 1 of the chemical investigation activities under the Administrative Order on Consent (AOC) or Remedial Action [Docket Number HSA-CO 10/11-037] between DOE and the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) (DTSC 2010).

## 1.1 Objective and Basis for Data Gap Investigation Sampling for Go-Backs, Trenches and Soil Vapor Locations

The specific objective of sampling under the Chemical Data Gap Investigation is to identify the nature and extent (vertical and lateral) of soil contamination within Area IV for cleanup remedy evaluation.

**Go-Backs**

Go-Back sampling was completed during two separate sample events. The data gap analysis listed below provides the rationale for selection of each sample location and the chemical sampling rationale.

The document, *Final Data Gap Analysis for Subareas 5B, 5C, 3/6 Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California, (MWH 2014)* was prepared by MWH Americas, Inc. (MWH) and included as an attachment to *Addendum No. 10 to Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Go-Back Soil Chemical Sampling at Area IV for Subareas 5B, 5C, 3/6* (CDM Smith 2014).

The document, *Final Data Gap Analysis for Subareas 5A, 5D, 8, and Northern Buffer Zone Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California*, (MWH 2014) was prepared by MWH and included as an attachment to *Addendum No. 11 to the Master Field Sampling Plan for Chemical Data Gap Investigation, Phase 3 Go-Back Soil Chemical Sampling at Area IV for Subareas 5A, 5D, 8, and Northern Buffer Zone (CDM Smith 2014).*

**Trenches**

Soil samples were collected from trenches to address data gaps proposed in the Final Phase 3 Data Gap Analysis Technical Memorandums for Subareas 5A, 5B, 5C, 5D, 3/6, 7 and 8. The trench locations were selected according to previous geophysical surveys, aerial photos, debris surveys and historical

[1] During the "Go Back" evaluation that occurred the spring of 2014, DOE evaluated the totality of information collected for Area IV along with the proposed cleanup standards. This evaluation included proposed sample locations within Subarea 5A to determine their necessity for completing characterization objectives. Some proposed locations were not sampled based on this assessment.

document reviews. A summary of observations observed and recorded during trenching, including descriptions of targeted features and new findings, are presented in the *Technical Memorandum Summary of Phase 3 Trench Investigation Activities in Area IV, Santa Susana Field Laboratory, Ventura County* (MWH September 2014).

**Soil Vapor**

Soil Vapor sampling for volatile organic compounds (VOCs) was conducted by MWH within Area IV, over all subareas, to further characterize contamination at potential sources in accordance with the AOC. The sample locations were selected by a focused approach based on known or suspected chemical use areas and in areas of groundwater VOC impacts. Soil vapor sampling activities and results are presented in the *Technical Memorandum Summary of Phase 3 Soil Vapor Investigation Activities in Area IV, Santa Susana Field Laboratory, Ventura County* (MWH September 2014).

CDM Smith collected soil samples at selected MWH soil vapor locations.

**Soil Samples**

CDM Smith was responsible for all aspects of the field sampling program under Phase 3 of the AOC, including:

- Staking the sample locations with Global Positioning System (GPS) that were selected as a result of the data gap investigation in the field using geographic information system (GIS) coordinates
- Collection of all samples in accordance with the procedures and controls specified in the Master FSP (CDM Smith 2012a), including but not limited to: sample collection; sample container preparation; sample handling; and documentation
- Sample management and shipment, laboratory coordination, and chemical analyses of the samples
- Data review and validation

## 1.2 Geology

The Chatsworth Formation (Fm) underlies approximately 80 percent of Area IV and is composed predominantly of sandstone interbedded with siltstone and shale. The Santa Susana Fm is composed of interbedded micecous claystone, siltstone and thin sandstone layers, underling approximately 20 percent of Area IV. The tan fine-grained sandstones of the Santa Susana predominantly Fm are known for thin shell beds and calcareous concretions, many observed in outcrops and in Subarea 8 and southern parts of Subarea 5D. The overlying native soils encountered in all other subareas range from silty sands to sandy silts at shallow depths with increasing clay content to 10 feet below ground surface (ft-bgs). Disturbed areas in all subareas are comprised of fill soils of unknown origin and debris such as concrete, asphalt, and wood. The contact with both formations at many soil boring locations occurs between 2 and 10 ft-bgs. Additional information regarding the geology in Area IV can be found in Volume I of Group 5 – Central Portion of Areas III and IV RCRA Facility Investigation Report, Santa Susana Field Laboratory, Ventura County, California (CH2M Hill 2008).

## 1.3 Technical Memorandum Organization

This TM includes the following sections:

- **Section 1 - Introduction** – Summarizes the basis and objectives of Phase 3 soil sampling for Go-Backs, Trenches and Soil Vapor Locations
- **Section 2 - Field Sampling and Analytical Methods** – Provides details regarding field sampling procedures and laboratory analytical methods
- **Section 3 – Go-Backs, Trenches and Soil Vapor Location Phase 3 Soil Sample Analytical Results** – Provides a summary of detected analytical results for each chemical; the appendices provide the overall results
- **Section 4 - Data Usability Assessment** – Discusses the results of the data review and validation processes
- **Section 5 – References** – Identifies the documents used in this report

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# Section 2

# Field Sampling and Analytical Methods

One hundred and fourteen soil samples were collected from seventy-six Phase 3 Go-Back locations; 57 soil samples were collected from 19 Phase 3 Trenches; and 70 soil samples were collected from 56 Soil Vapor Locations. Go-Back samples were collected between January 13 and June 18, 2014; Trench samples were collected between May 19 and June 4, 2014; and Soil Vapor Location soil samples were collected between May 12 and June 12, 2014.

The depths of the Phase 3 soil borings completed during the Go-Back sampling ranged from 0.3 ft-bgs and 10 ft-bgs, with a few locations reaching total depths greater than 10 ft-bgs. During the trenching sample event, depths ranged from 2.8 ft-bgs to 15.5 ft-bgs. Soil Vapor soil samples were only collected when shallow refusal was encountered or when soil appeared stained, altered, had odor, etc. These location depths ranged from 1.25 ft-bgs to 21 ft-bgs. Sample locations and depths from Go-Backs, Trenches and Soil Vapor Locations for Phase 3 are shown on Figures 2-1, 2-2 and 2-3 respectively. Appendices E and G also provide the specific boring log for each sample location.

Tables 2-1, 2-2 and 2-3 include the data gap rationale for sampling at each Go-Back, Trench and Soil Vapor location, along with the location description, sample numbers, sample type, date of sample collection, depth of boring, analyses sampled for, description of any fill materials encountered, and reasons for not sampling some of the locations proposed in the Data Gap Analysis TMs (CDM Smith 2012b and 2013). As discussed in previous data reports, sampling of test pit and trench locations in all subareas had been deferred until this sample event. Samples proposed within cultural or ecological sensitive areas (ESA) may not have been collected. If needed for remediation, ESA sampling would take place during the soil remediation phase of the project and under the supervision of the cultural/biological monitors. Some proposed sample locations were outside of the Area IV boundary on neighboring property and were not sampled because land owners did not grant access.

The Chemical Data Summary Report will provide additional discussion on how deferred sample locations will be addressed.

All soil sampling equipment (described in Sections 2.1 and 2.2) that came into contact with sample materials was decontaminated prior to sample collection in accordance with SSFL SOP 12 (Field Equipment Decontamination) of the Master FSP (CDM Smith 2012a). All samples, for both surface and subsurface soil, were screened for radioactivity using a Micro R Survey Meter (for gamma radiation) and a Pancake Frisker Detector (for alpha and beta radiation), followed by screening with a photoionization detector (PID) as directed in SSFL SOP 7 (Field Measurement of Residual Radiation). For each sample collected, the site geologist also completed a field sample data sheet (FSDS) in accordance with SSFL SOP 8 (Field Data Collection Documents, Content and Control) and the completed form was reviewed for correctness in the field by the field sampler and by the sample coordinator during sample processing. A boring log was created in accordance with SSFL SOP 9 (Lithologic Logging) of the Master FSP (CDM Smith 2012a) for each location and reviewed by a state certified Professional Geologist. The FSDS sheets and associated boring logs are presented in Appendix E.

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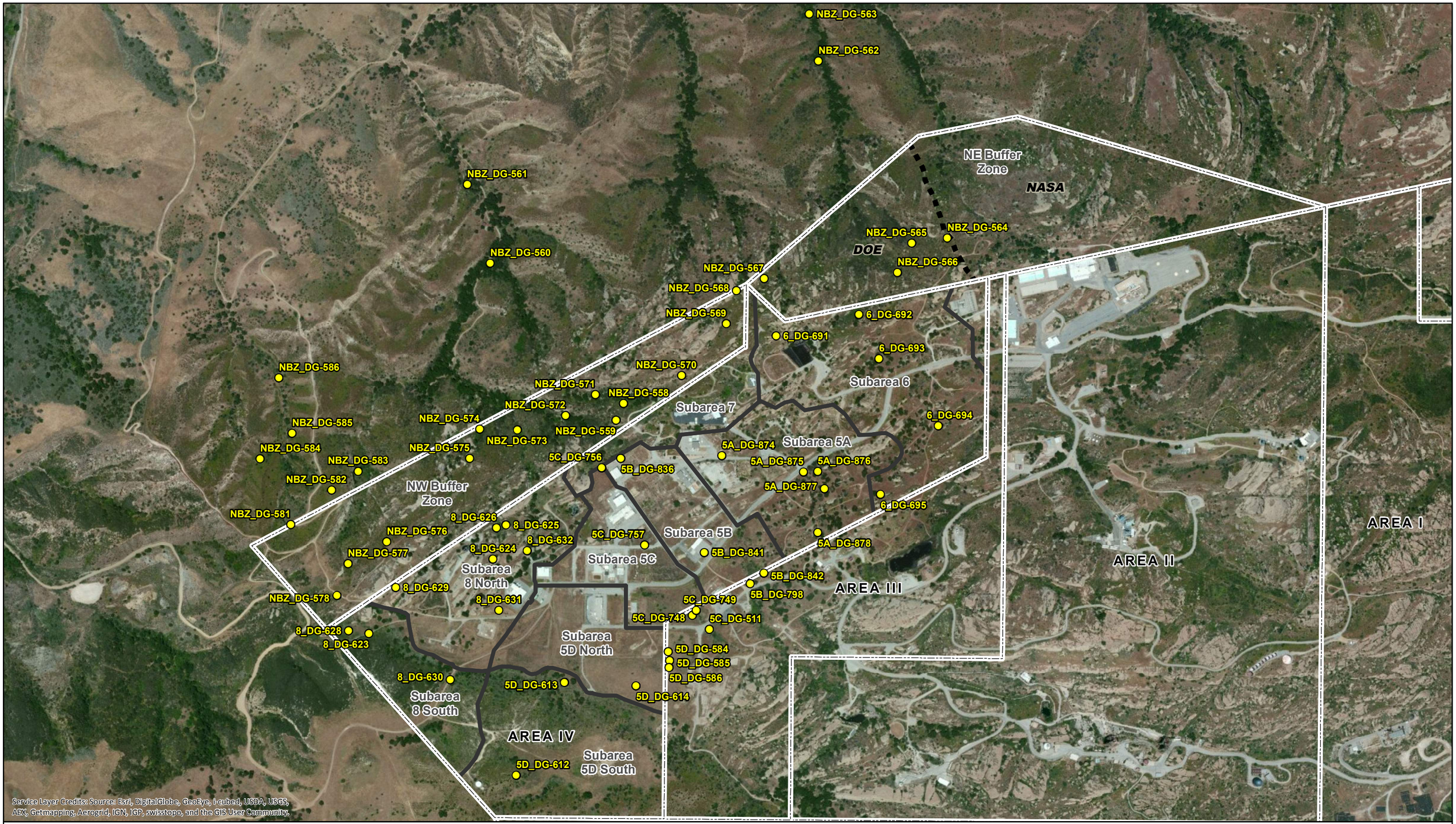


**Legend**

- Sample Location
- Site Area
- Area IV Subarea
- NE Buffer Zone Cleanup Responsibility

# Go-Back Sample Locations

0 400 800 1,600 Feet

Santa Susana Field Laboratory
Ventura County, California
**Figure 2-1**

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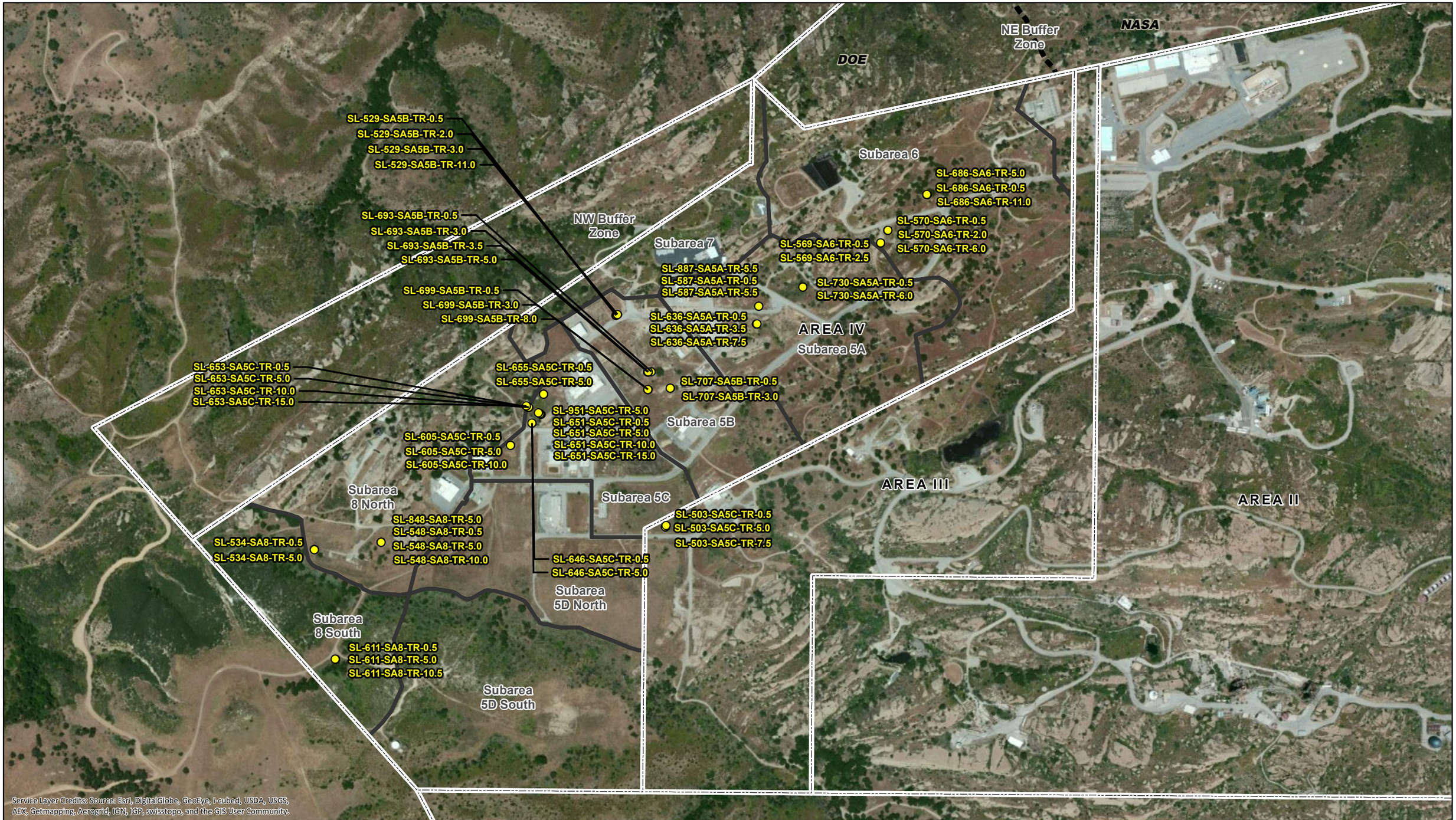


**Legend**

- Sample Location
- Site Area
- Area IV Subarea
- NE Buffer Zone Cleanup Responsibility

# Trench Sample Locations

0 300 600 1,200 Feet

Santa Susana Field Laboratory
Ventura County, California
**Figure 2-2**

CDM Smith

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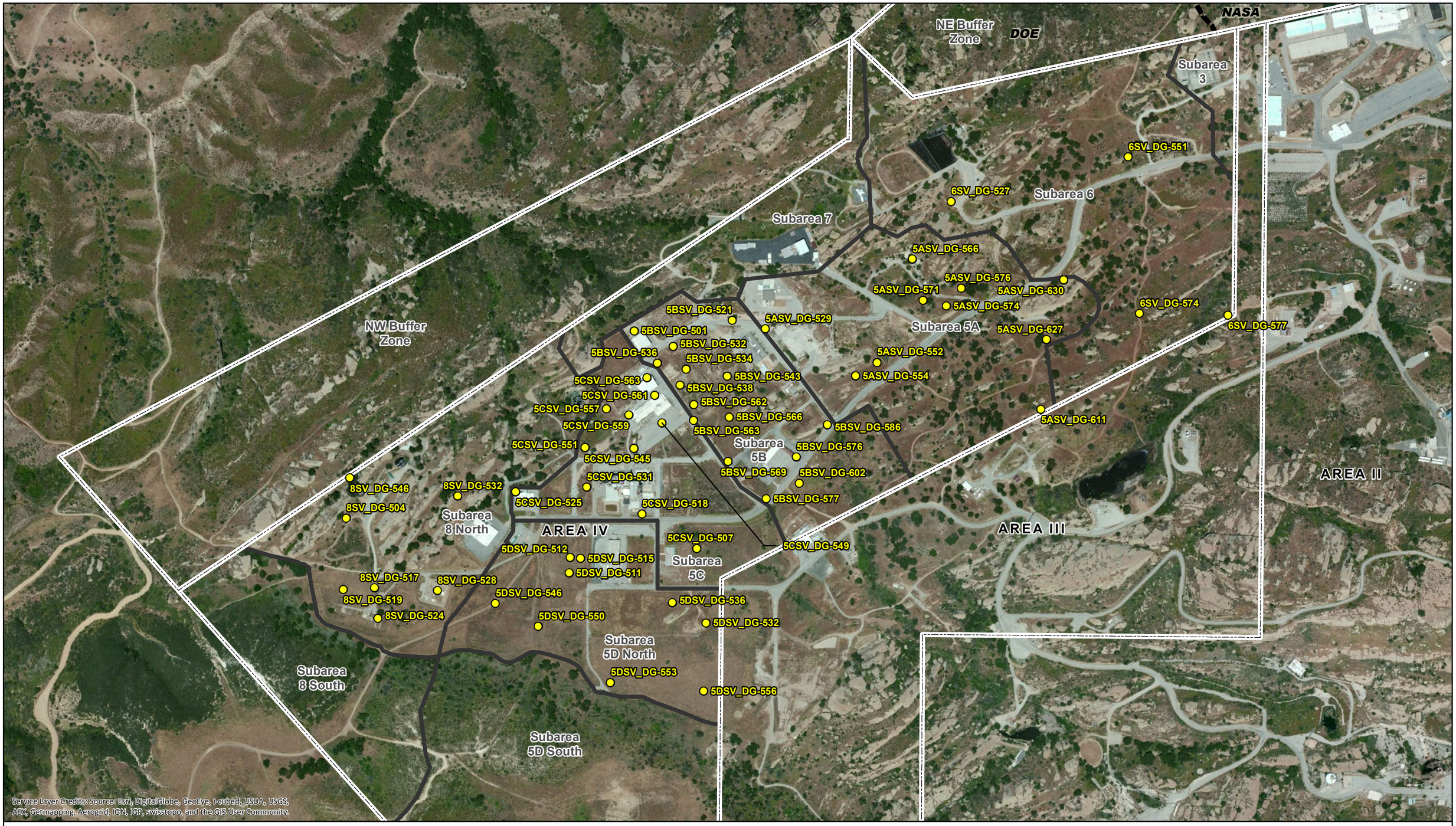


# Soil Vapor Locations

**Legend**

- Sample Location
- Site Area
- Area IV Subarea
- NE Buffer Zone Cleanup Responsibility

0 250 500 1,000 Feet

Santa Susana Field Laboratory
Ventura County, California
**Figure 2-3**

CDM Smith

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| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| **Subarea 5B** | | | | | | | | |
| 5B_DG-798 | Drainage South of Area III/ IV Boundary | Stepout to delineate down drainage extent of PAH, PCB, dioxins, and metals impacts from sample SL-284-SA5B. | 2.3 | None indicated. | 5/7/2014 | Surface | FDG-SL-798-SA5B-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| 5B_DG-836 | B4013 Footprint | One of two locations to evaluate depth to bedrock in area around B4013. Stepdown at 5B_DG-511 since previous sample did not contact bedrock and had exceedances in deepest sample at 10 feet bgs. | 19.8 | 0-16.0 ft bgs: fill described as igneous/metamorphic gravel, other rock clasts and wood. Refusal on sandstone bedrock. | 5/13/2014 | Subsurface | FDG-SL-836-SA5B-SB-15.0-16.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/13/2014 | Subsurface | FDG-SL-836-SA5B-SB-19.0-20.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5B_DG-837 | B4013 Footprint | One of two locations to evaluate depth to bedrock in area around B4013. Stepdown at SL-295-SA5B since previous sample did not contact bedrock and had exceedances in deepest sample at 10 feet bgs. | 12.3 | 0-11.6 ft bgs: fill described as various gravel clasts. Refusal on sandstone bedrock | Location not sampled due to shallow refusal. | | | |
| 5B_DG-838 | B4006 Footprint | Targets former features (18-inch diameter tubes) removed during demolition of B4006 and stained soil encountered. Bedrock anticipated >20 feet bgs (excavation extended to 20 feet bgs during feature removal). | 7.7 | 0-3.0 ft bgs: fill described as igneous/metamorphic gravel and concrete. 3.0-5.5 ft bgs: fill described as siltstone gravel. Refusal on bedrock. | 5/31/2013 | Surface | SL-838-SA5A-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 1/13/2014 | Surface | SL-838-SA5B-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 1/13/2014 | Subsurface | SL-838-SA5B-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5B_DG-839 | B4006 Footprint | Targets former features (18-inch and 48-inch diameter tubes) removed during demolition of B4006 and stained soil encountered. Bedrock anticipated >20 feet bgs (excavation extended to 20 feet bgs during feature removal). | 16.6 | 0-16.6 ft bgs: fill described as igneous/metamorphic and siltstone gravel. Refusal on bedrock. | 1/14/2014 | Surface | SL-839-SA5B-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 1/14/2014 | Subsurface | SL-839-SA5B-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 1/14/2014 | Subsurface | SL-839-SA5B-SB-9.0-10.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 1/14/2014 | Subsurface | SL-839-SA5B-SB-15.5-16.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

**Table 2-1**
**Soil Samples Designated to be Collected for Go-Backs - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5B_DG-840 | West of B4006 | Targets former dry well removed during demolition of B4006. Bedrock anticipated <10 feet bgs. | 8 | 0-4.0 ft bgs: fill described as igneous/metamorphic and siltstone gravel. 4.0-8.0 ft bgs: fill described as asphalt clasts. Refusal on bedrock. | 1/13/2014 | Surface | SL-840-SA5B-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 1/13/2014 | Surface | SL-840-SA5B-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 1/13/2014 | Subsurface | SL-840-SA5B-SB-7.0-8.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5B_DG-841 | B4011 Footprint | Targets stained soil encountered during demolition of B4011. Bedrock anticipated <10 feet bgs. | 10.2 | 0-10 ft bgs: fill described as various clasts and clay pockets and clean fill. Shale/mudstone at bottom. Refusal on fill. | 5/14/2014 | Surface | FDG-SL-841-SA5B-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 5/14/2014 | Subsurface | FDG-SL-841-SA5B-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/14/2014 | Subsurface | FDG-SL-841-SA5B-SB-9.0-10.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5B_DG-842 | South of 17th St. Pond Clearly Contaminated Area | Characterizes area downslope of samples with results above LUT values. Locate drainage feature (e.g. rill, topographic low, etc.) and map with GPS prior to collection of sample. Bedrock anticipated <10 feet bgs. | 4.5 | None Indicated. Refusal on sandstone bedrock. | 5/14/2014 | Surface | FDG-SL-842-SA5B-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 5/14/2014 | Subsurface | FDG-SL-842-SA5B-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5B_DG-843 | B4816 Footprint | Targets stained soil encountered during demolition of B4816. Bedrock anticipated <10 feet bgs. | 8.2 | 0-6.0 ft bgs: fill described as igneous/metamorphic and siltstone gravel and red brick. Refusal on bedrock. | 1/14/2014 | Surface | SL-843-SA5B-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 1/14/2014 | Subsurface | SL-843-SA5B-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 1/14/2014 | Subsurface | SL-843-SA5B-SB-7.0-8.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| **Subarea 5C** | | | | | | | | |
| 5C_DG-511 | Drainage Southeast of Potential Fill Area East of B4015 | Location targets drainage southeast of B4015 field in Area III just before confluence with STL-IV drainage. | 3 | None Indicated. | 5/8/2014 | Surface | FDG-SL-511-SA5C-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| | | | | | 5/8/2014 | Subsurface | FDG-SL-511-SA5C-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| 5C_DG-748 | Drainage Southeast of B4015 Field | Location targets southeast portion of the drainage that runs through the B4015 field; specifically characterizes area down drainage from detects and prior to confluence with the drainage east of B4015 field. | 4.5 | None Indicated. Refusal on bedrock. | 5/12/2014 | Surface | FDG-SL-748-SA5C-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| | | | | | 5/12/2014 | Subsurface | FDG-SL-748-SA5C-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| 5C_DG-749 | Drainage Southeast of B4015 Field | Location targets southern portion of the drainage east of B4015 field; specifically characterizes area down drainage from detects and prior to confluence with the drainage that runs through B4015 field. | 2.5 | None Indicated. | 5/8/2014 | Surface | FDG-SL-749-SA5C-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| | | | | | 5/8/2014 | Surface Duplicate | FDG-SL-1049-SA5C-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| 5C_DG-756 | NE of B4059 | Stepdown at SL-001-SA5C to evaluate depth of impacts and bedrock. Previous sample did not contact bedrock and had exceedances in deepest sample collected at 10 feet bgs. | 16.6 | 0-2 ft bgs: fill described as silty sand. 2.0-5.2 ft bgs: fill described as sand with silt. 5.2-13.8 ft bgs: fill described as clayey sand. Refusal on bedrock. | 5/13/2014 | Subsurface | FDG-SL-756-SA5C-SB-15.0-16.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| 5C_DG-757 | South of B4066 | Location targets sanitary sewer pipeline that runs along the north side of F Street. Bedrock anticipated <10 feet bgs. | 10.1 | 0-9 ft bgs: fill described as various rock clasts, igneous/metamorphic gravel, clay pockets. Refusal on sandstone bedrock. | 5/14/2014 | Surface | FDG-SL-757-SA5C-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| | | | | | 5/14/2014 | Subsurface | FDG-SL-757-SA5C-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |
| | | | | | 5/14/2014 | Subsurface | FDG-SL-757-SA5C-SB-8.0-9.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045 |

**Table 2-1**
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| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| **Subarea 5A** | | | | | | | | |
| 5A_DG-874 | South of Building 4027 | Location targets water conveyance line and open storage identified in EPA TM and present in the 1960 aerial. Bedrock anticipated >10 feet bgs (adjacent samples did not encounter bedrock). | 13.5 | 100% fill from ground surface to 11.5 ft - igneous/metamorphic rock fragments and gravel. Most likely native soil/ bedrock sand from 11.5 ft to 13.5 ft. | 5/20/2014 | Surface | FDG2-SL-874-SA5A-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/20/2014 | Subsurface | FDG2-SL-874-SA5A-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/20/2014 | Subsurface Duplicate | FDG2-SL-1174-SA5A-SB-4.0-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/20/2014 | Subsurface | FDG2-SL-874-SA5A-SB-12.0-13.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5A_DG-875 | East of Open Storage Area Along G Street | Location targets intersection of the sanitary sewer pipelines that run along the south side of G Street and the west side of 12th Street and natural gas pipeline that runs along the south side of G Street. Bedrock anticipated ~10 feet bgs. | 2.8 | 0-0.5 ft bgs: fill described as foreign rock fragments. Refusal on bedrock. | 6/16/2014 | Surface | FDG2-SL-875-SA5A-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 6/16/2014 | Subsurface | FDG2-SL-875-SA5A-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, 1,4 Dioxane EPA 8260 SIM, TPH-GRO EPA 8015, VOC EPA 8260 |
| | | | | | 6/16/2014 | Subsurface Duplicate | FDG2-SL-1175-SA5A-SB-2.0-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, 1,4 Dioxane EPA 8260 SIM, TPH-GRO EPA 8015, VOC EPA 8260 |
| 5A_DG-876 | East of Open Storage Area Along G Street | Stepdown at 5A_DG-822 to evaluate depth of impacts. Analyze phthalates (EPA Method 8270 SIM), dioxins, and TPH based on LUT exceedances in the surface sample and in surrounding samples, and re-analyze surface sample for phthalates (potential laboratory contaminant) and TPH with silica gel cleanup to evaluate the potential inclusion of organic-derived hydrocarbons in the original result. Bedrock anticipated ~7 feet bgs. Collect and analyze samples at 5-foot intervals to bedrock beginning at 5 feet bgs. | 4.5 | None indicated. Refusal on bedrock. | 6/16/2014 | Surface | FDG2-SL-876-SA5A-SB-0.0-0.5 | PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| | | | | | 6/16/2014 | Subsurface | FDG2-SL-876-SA5A-SB-4.0-5.0 | Dioxins EPA 1613, PAH EPA 8270 SIM, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

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|---|---|---|---|---|---|---|---|---|
| 5A_DG-877 | West of SE Drum Yard | Stepdown at 5A_DG-825 to evaluate depth of impacts. Analyze phthalates (EPA Method 8270 SIM), dioxins, and TPH based on LUT exceedances in the surface sample and in surrounding samples, and re-analyze surface sample for phthalates (potential laboratory contaminant) and TPH with silica gel cleanup to evaluate the potential inclusion of organic-derived hydrocarbons in the original result. Bedrock anticipated ~15 feet bgs. Collect and analyze samples at 5-foot intervals to bedrock beginning at 5 feet bgs. | 3.2 | 0-0.5 ft bgs: fill described as trace foreign rock fragments. Refusal on bedrock. | 6/16/2014 | Surface | FDG2-SL-877-SA5A-SB-0.0-0.5 | PAH EPA 8270 SIM, TPH-EFH EPA 8015 |
| | | | | | 6/16/2014 | Subsurface | FDG2-SL-877-SA5A-SB-3.0-4.0 | Dioxins EPA 1613, PAH EPA 8270 SIM, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5A_DG-878 | East of Clearly Contaminated Area (Eastern Hummocky Area) | Same as 5D_DG-612 | 4.6 | 0-3.6 ft bgs: fill described as 50% wood. Refusal on bedrock. | 6/11/2014 | Surface | FDG2-SL-878-SA5A-SB-0.0-0.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| | | | | | 6/11/2014 | Subsurface | FDG2-SL-878-SA5A-SB-4.0-5.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045, TPH-GRO EPA 8015 |

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| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| **Subarea 5D** | | | | | | | | |
| 5D_DG-584 | East of B4353 | Targets drainage identified in the EPA TM. Locate drainage feature (e.g. rill, topographic low, etc.) and map with GPS prior to collection of samples. Also characterizes area downslope of the B4353 Leach Field and serves as a stepout for dioxins, PAHs, TPH, pesticides, and silver. Bedrock anticipated <10 feet bgs. | 6 | At sample depth 0.0 ft to 0.5 ft, 100% fill - non-native rock fragments. At sample depth 4 ft to 5 ft, no fill indicated. | 5/21/2014 | Surface | FDG2-SL-584-SA5D-SB-0.0-0.5 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 5/21/2014 | Surface | FDG2-SL-584-SA5D-SB-4.0-5.0 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5D_DG-585 | Southeast of B4353 | Targets one of the two drainages southeast of B4353. Locate drainage feature (e.g. rill, topographic low, etc.) and map with GPS prior to collection of samples. Also serves as a stepout for dioxins, PAHs, TPH, pesticides, formaldehyde, cadmium, mercury, and silver to the northwest. Bedrock anticipated <10 feet bgs. | 5.1 | At sample depth 0.0 ft to 0.5 ft, 100% fill - non-native rock fragments. At sample depth 4 ft to 5 ft, no fill indicated. | 5/21/2014 | Surface | FDG2-SL-585-SA5D-SB-0.0-0.5 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 5/21/2014 | Surface Duplicate | FDG2-SL-885-SA5D-SB-0.0-0.5 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/21/2014 | Subsurface | FDG2-SL-585-SA5D-SB-4.0-5.0 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| 5D_DG-586 | Southeast of B4353 | Targets one of the two drainages southeast of B4353. Locate drainage feature (e.g. rill, topographic low, etc.) and map with GPS prior to collection of samples. Also serves as a stepout for dioxins, PAHs, and pesticides to the northwest. Bedrock anticipated <10 feet bgs. | 3 | At sample depth 0.0 ft to 0.5 ft, 100% fill - non-native rock fragments. At sample depth 2 ft to 3 ft, no fill indicated. | 5/21/2014 | Surface | FDG2-SL-586-SA5D-SB-0.0-0.5 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 5/21/2014 | Subsurface | FDG2-SL-586-SA5D-SB-2.0-3.0 | Dioxins EPA 1613, Formaldehyde EPA 8315, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5D_DG-610 | West of B4701 (Water Tank) | Stepout for dioxins, PAHs, PCBs, herbicides, and pesticides detected above LUT values in samples collected from locations around the Water Tank. Target surface water flow pathway, if present. Bedrock anticipated <10 feet bgs. | Location not sampled due to location on adjacent property. Access was not granted by land owners to perform sampling. | | | | | |
| 5D_DG-611 | Southwest of B4701 (Water Tank) | Same as 5D_DG-610. | | | | | | |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5D_DG-612 | Northeast of B4701 (Water Tank) | One of 37 locations within Area IV and NBZ for TPH re-analysis to evaluate the potential inclusion of organic-derived hydrocarbons in the original result. The locations selected are generally outside of operational areas and have sample results that exceed the LUT values only for TPH without using silica gel cleanup prior to analysis. Samples will undergo silica gel cleanup prior to analysis to remove most of the polar biogenic organics. PAHs, PCBs, and metals are included to evaluate presence of other toxic constituents (excluded if previously analyzed at location and specific sample depth). | 0.5 | 0-0.5 ft bgs: fill described as rock fragments. | 6/10/2014 | Surface | FDG2-SL-612-SA5D-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 5D_DG-613 | Northeastern Portion of Hillslope | Same as 5D_DG-612 | 0.5 | 0-0.5 ft bgs: fill described as disturbed soil. | 6/10/2014 | Surface | FDG2-SL-613-SA5D-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 5D_DG-614 | South of B4353 | Same as 5D_DG-612 | 0.5 | 0-0.5 ft bgs: fill described as disturbed soil. | 6/10/2014 | Surface | FDG2-SL-614-SA5D-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| **Subarea 6** | | | | | | | | |
| 6_DG-691 | East of B4686 | Same as 5D_DG-612 | 0.5 | None indicated. | 6/6/2014 | Surface | FDG2-SL-691-SA6-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 6_DG-692 | Northeast of SRE Pond | Same as 5D_DG-612 | 0.5 | None indicated. | 6/6/2014 | Surface | FDG2-SL-692-SA6-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 6_DG-693 | West of ESG Storage Yard | Same as 5D_DG-612 | 0.5 | None indicated. | 6/6/2014 | Surface | FDG2-SL-693-SA6-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 6_DG-694 | Northeast Portion of Subarea 6 South | Same as 5D_DG-612 | 0.5 | 0-0.5ft bgs: fill described as disturbed soil. | 6/11/2014 | Surface | FDG2-SL-694-SA6-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 6_DG-695 | Southwest Portion of Subarea 6 South | Same as 5D_DG-612 | 0.5 | 0-0.5ft bgs: fill described as slightly disturbed soil. | 6/11/2014 | Surface | FDG2-SL-695-SA6-SB-0.0-0.5 | TPH-EFH EPA 8015 |

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| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| **Subarea 8** | | | | | | | | |
| 8_DG-617 | Western Portion of Hillslope | Targets mineralized area southwest of SL-005-SA8S and SL-007-SA8S to provide additional data to evaluate the potential that strontium detections above screening levels on the Subarea 8 Hillslope are related to the mineralization of geologic feature and are naturally occurring (e.g., associated as a trace element in the calcium carbonate). Location will be based on field observation of mineralization. Also serves as a stepout for hexavalent chromium at SL-007-SA8S. Samples will be analyzed for metals only, including hexavalent chromium. Bedrock anticipated <10 feet bgs. | Location not sampled due to location on adjacent property. Access was not granted by land owners to perform sampling. | | | | | |
| 8_DG-618 | Southern Portion of Hillslope | Targets mineralized area southwest of SL-001-SA8S to provide additional data to evaluate the potential that strontium detections above screening levels on the Subarea 8 Hillslope are related to the mineralization of geologic feature and are naturally occurring (e.g., associated as a trace element in the calcium carbonate). Location will be based on field observation of mineralization. Samples will be analyzed for metals, including hexavalent chromium. Bedrock anticipated <10 feet bgs. | Location not sampled due to location on adjacent property. Access was not granted by land owners to perform sampling. | | | | | |
| 8_DG-619 | Western Portion of Hillslope | Locations assess potential impacts from aerial dispersion related to burning and treatment activities at the former FSDF ponds. Located southwest of FSDF in the periodic 'Santa Ana' wind direction. Two locations (e.g., 8_DG-619 and 8_DG-621) target drainages to evaluate the potential for subsequent surface water transport of aerially deposited contaminants. Bedrock depth unknown. At 8_DG-620 and 8_DG-622, collect deepest sample targeting soil just above bedrock. | | | | | | |
| 8_DG-620 | Western Portion of Hillslope | | | | | | | |
| 8_DG-621 | Western Portion of Hillslope | | | | | | | |
| 8_DG-622 | Western Portion of Hillslope | | | | | | | |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 8_DG-623 | Northwestern Portion of Hillslope | Stepdown at 8_DG-601 to evaluate depth of impacts. Analyze for TPH based on LUT exceedances in surface sample and sample collected at 5 feet bgs (deeper samples were not analyzed), and re-analyze surface sample and 5-foot sample for TPH with silica gel cleanup to evaluate the potential inclusion of organic-derived hydrocarbons in the original result. Bedrock anticipated ~20 feet bgs. Collect samples at 5-foot intervals to bedrock. | 20 | At sample depths 0.5 and 5.0, 100% fill - possibly road material (gravel). At sample depths 10.0, 15.0, and 20.0, no fill indicated. | 5/21/2014 | Surface | FDG2-SL-623-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| | | | | | 5/21/2014 | Subsurface | FDG2-SL-623-SA8-SB-4.0-5.0 | TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/21/2014 | Subsurface | FDG2-SL-623-SA8-SB-9.0-10.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/21/2014 | Subsurface | FDG2-SL-623-SA8-SB-14.0-15.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/21/2014 | Subsurface | FDG2-SL-623-SA8-SB-19.0-20.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 8_DG-624 | Northwest of B4009 | Location assesses potential air dispersion impacts related to burning activities at the B4100 Trench and is located northwest of the B4100 Trench in the prevailing wind direction. Location is one of three locations proposed that will assess this migration pathway (the others include 8_DG-625 and 8_DG-626). Additional sampling to address this pathway was also performed during Phase 3 sampling in Subarea 8 and the Northern Buffer Zone Subarea. Bedrock anticipated <10 feet bgs. | 1.6 | None indicated. | 6/5/2014 | Surface | FDG2-SL-624-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 8_DG-625 | West of the B4056 Landfill | Location assesses potential air dispersion impacts related to burning activities at the B4100 Trench and is located northwest of the B4100 Trench in the prevailing wind direction. Location is one of three locations proposed that will assess this migration pathway, the others include 8_DG-624 and 8_DG-626. Additional sampling to address this pathway was also performed during Phase 3 sampling in Subarea 8 and the Northern Buffer Zone Subarea. Bedrock anticipated <10 feet bgs. | 2 | None indicated. Refusal on bedrock. | 6/5/2014 | Surface | FDG2-SL-625-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |

**Table 2-1**
**Soil Samples Designated to be Collected for Go-Backs - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 8_DG-626 | West of the B4056 Landfill | Location assesses potential air dispersion impacts related to burning activities at the B4100 Trench and is located northwest of the B4100 Trench in the prevailing wind direction. Location is one of three locations proposed that will assess this migration pathway, the others include 8_DG-624 and 8_DG-625. Additional sampling to address this pathway was also performed during Phase 3 sampling in Subarea 8 and the Northern Buffer Zone Subarea. Bedrock anticipated <10 feet bgs. | 5.4 | None indicated. Refusal on bedrock. | 6/6/2014 | Surface | FDG2-SL-626-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| | | | | | 6/6/2014 | Subsurface | FDG2-SL-626-SA8-SB-4.0-5.0 | TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 8_DG-628 | Northwestern Portion of Hillslope | Same as 5D_DG-612 | 14.8 | None indicated. Refusal on bedrock. | 5/22/2014 | Surface | FDG2-SL-628-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| | | | | | 5/22/2014 | Subsurface | FDG2-SL-628-SA8-SB-4.0-5.0 | TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/22/2014 | Subsurface | FDG2-SL-628-SA8-SB-9.0-10.0 | TPH-GRO EPA 8015, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 5/22/2014 | Subsurface | FDG2-SL-628-SA8-SB-14.0-15.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 8_DG-629 | West of FSDF | Same as 5D_DG-612 | 1.3 | None indicated. Refusal on bedrock. | 6/11/2014 | Surface | FDG2-SL-629-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| 8_DG-630 | Eastern Portion of Hillslope | Same as 5D_DG-612 | 7.5 | 0-4.0 ft bgs: fill described as 100% rock fragments. | 6/10/2014 | Surface | FDG2-SL-630-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| | | | | | 6/10/2014 | Subsurface | FDG2-SL-630-SA8-SB-4.0-5.0 | TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 6/10/2014 | Subsurface Duplicate | FDG2-SL-930-SA8-SB-4.0-5.0 | TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 6/10/2014 | Subsurface | FDG2-SL-630-SA8-SB-7.0-8.0 | TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 8_DG-631 | Southwest of B4009 | Same as 5D_DG-612 | 7.6 | None indicated. Refusal on bedrock. | 6/5/2014 | Surface | FDG2-SL-631-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| | | | | | 6/5/2014 | Subsurface | FDG2-SL-631-SA8-SB-4.5-5.0 | TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 6/5/2014 | Subsurface | FDG2-SL-631-SA8-SB-7.0-8.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, TPH-GRO EPA 8015, pH EPA 9045 |
| 8_DG-632 | Southwest of B4056 Landfill | Same as 5D_DG-612 | 0.5 | 0-0.5 ft bgs: fill described as 50%-100% valley fill. | 6/9/2014 | Surface | FDG2-SL-632-SA8-SB-0.0-0.5 | TPH-EFH EPA 8015 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| **Northern Buffer Zone** | | | | | | | | |
| NBZ_DG-558 | Eastern Portion of NBZ-NW | Stepout for exceedances of TPH and herbicides at SL-021-NBZ and NBZ_DG-525, and dioxins, PAHs, and pesticides at SL-023-NBZ. PCBs and metals are initially placed on hold, with analysis occurring if TPH exceeds the LUT value to evaluate toxic constituents. Bedrock anticipated <5 feet bgs. | 1.1 | None indicated. Refusal on bedrock. | 6/9/2014 | Surface | FDG2-SL-558-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Herbicides EPA 8151, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| | | | | | 6/9/2014 | Surface Duplicate | FDG2-SL-858-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Herbicides EPA 8151, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-559 | Eastern Portion of NBZ-NW | Stepout for exceedances of TPH and dioxins at SL-018-NBZ, TPH at U7BS0006, TPH and herbicides at NBZ_DG-556, Se and Ag at SL-113-SA7, TPH at 7_DG-553, and TPH and herbicides at SL-021-NBZ. PAHs, PCBs, and metals are initially placed on hold, with analysis occurring if TPH exceeds the LUT value to evaluate toxic constituents. Bedrock anticipated <5 feet bgs. | 0.5 | None indicated. Refusal on bedrock. | 6/9/2014 | Surface | FDG2-SL-559-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Herbicides EPA 8151, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-560 | North of NBZ-NW | Stepout downdrainage from exceedance of PAHs at NBZ_DG-529 and evaluates exceedance of phthalates, acetone, and methylene chloride at BB-03-005. Samples on hold for TPH, PCBs, and metals pending the TPH re-analysis results using silica gel cleanup (EPA Method 3630) being performed at locations within Area IV and NBZ. Bedrock anticipated <5 feet bgs. | 0.7 | None indicated. Refusal on large cobble. | 6/11/2014 | Surface | FDG2-SL-560-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-561 | North of NBZ-NW | Same as NBZ_DG-560. | 0.6 | None indicated. | 5/23/2014 | Surface | FDG2-SL-561-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| NBZ_DG-562 | North of NBZ-NE | Stepout downdrainage from exceedances of dioxins and pesticides at NBZ_DG-540. Samples on hold for TPH, PAHs, PCBs, and metals pending the TPH re-analysis results using silica gel cleanup (EPA Method 3630) being performed at locations within Area IV and NBZ. Bedrock anticipated <5 feet bgs. | 1.5 | None indicated. Refusal on bedrock. | 6/12/2014 | Surface | FDG2-SL-562-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |

**Table 2-1**
**Soil Samples Designated to be Collected for Go-Backs - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-563 | North of NBZ-NE | Same as NBZ_DG-562 | 0.5 | None indicated. Refusal on bedrock. | 6/12/2014 | Surface | FDG2-SL-563-NBZ-SB-0.0-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-564 | Western Portion of NBZ-NE | Same as 5D_DG-612 | 0.5 | None indicated. | 6/10/2014 | Surface | FDG2-SL-564-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-565 | Western Portion of NBZ-NE | Same as 5D_DG-612 | 0.5 | None indicated. | 6/10/2014 | Surface | FDG2-SL-565-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-566 | Western Portion of NBZ-NE | Same as 5D_DG-612 | 0.5 | None indicated. | 6/10/2014 | Surface | FDG2-SL-566-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-567 | Northwestern Portion of NBZ-NE | Same as 5D_DG-612 | 0.5 | None indicated. | 6/17/2014 | Surface | FDG2-SL-567-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-568 | North of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/17/2014 | Surface | FDG2-SL-568-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-569 | Northeastern Portion of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/12/2014 | Surface | FDG2-SL-569-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-570 | Eastern Portion of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/12/2014 | Surface | FDG2-SL-570-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-571 | Central Portion of NBZ-NW | Same as 5D_DG-612 | 1 | None indicated. Refusal on bedrock. | 6/11/2014 | Surface | FDG2-SL-571-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-572 | Central Portion of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/17/2014 | Surface | FDG2-SL-572-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-573 | Central Portion of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/18/2014 | Surface | FDG2-SL-573-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |
| NBZ_DG-574 | North of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/18/2014 | Surface | FDG2-SL-574-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-575 | Western Portion of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/18/2014 | Surface | FDG2-SL-575-NBZ-SB-0.0-0.5 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, pH EPA 9045 |
| NBZ_DG-576 | Western Portion of NBZ-NW | Same as 5D_DG-612 | 2.9 | None indicated. | 6/10/2014 | Surface | FDG2-SL-576-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| | | | | | 6/10/2014 | Surface | FDG2-SL-576-NBZ-SB-2.0-3.0 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-577 | Southwestern Portion of NBZ-NW | Same as 5D_DG-612 | 0.75 | None indicated. Refusal on bedrock. | 6/11/2014 | Surface | FDG2-SL-577-NBZ-SB-0.0-0.5 | TPH-EFH EPA 8015 |

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| NBZ_DG-578 | Southwestern Portion of NBZ-NW | Same as 5D_DG-612 | 2.5 | None indicated. Refusal on bedrock. | 5/22/2014 | Surface | FDG2-SL-578-NBZ-SB-0.0-0.5 | pH EPA 9045, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| NBZ_DG-579 | Southwest of NBZ-NW | Same as 5D_DG-612 | Location not sampled due to location on adjacent property. Access was not granted by land owners to perform sampling. | | | | | |
| NBZ_DG-580 | Southwest of NBZ-NW | Same as 5D_DG-612 | | | | | | |
| NBZ_DG-581 | North of NBZ-NW | Same as 5D_DG-612 | 14 | 0-5 ft bgs: fill described as gravelly fill. Refusal on bedrock. | 5/22/2014 | Surface | FDG2-SL-581-NBZ-SB-0.0-0.5 | pH EPA 9045, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, TPH-EFH EPA 8015 |
| | | | | | 5/22/2014 | Subsurface | FDG2-SL-581-NBZ-SB-4.0-5.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/22/2014 | Subsurface | FDG2-SL-581-NBZ-SB-9.0-10.0 | TPH-GRO EPA 8015, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/22/2014 | Subsurface | FDG2-SL-581-NBZ-SB-13.0-14.0 | Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-582 | North of NBZ-NW | Same as 5D_DG-612 | 3.5 | None indicated. | 6/13/2014 | Surface | FDG2-SL-582-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| | | | | | 6/13/2014 | Surface | FDG2-SL-582-NBZ-SB-3.0-3.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| NBZ_DG-583 | North of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/12/2014 | Surface | FDG2-SL-583-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| NBZ_DG-584 | North of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/13/2014 | Surface | FDG2-SL-584-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| NBZ_DG-585 | North of NBZ-NW | Same as 5D_DG-612 | 0.5 | None indicated. | 6/13/2014 | Surface | FDG2-SL-585-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |
| NBZ_DG-586 | North of NBZ-NW | Same as 5D_DG-612 | 0.5 | 0-0.5 ft bgs: fill described as igneous/metamorphic gravel and pieces of red and green colored material. No refusal. | 6/13/2014 | Surface | FDG2-SL-586-NBZ-SB-0.0-0.5 | PCBs/PCTs EPA 8082, TPH-EFH EPA 8015 |

**Notes & Abbreviations:**

Note: The sample number for a "duplicate sample" was increased by 300 (e.g. SB-530 and SB-830)

AST = Above-ground Storage Tank
bgs = below ground surface
Cr (VI) = hexavalent chromium
EFH = extractable fuel hydrocarbon
EPA = Environmental Protection Agency
ESA = Environmentally Sensitive Area
ESADA = Empire State Atomic Development Authority
ESG = Energy Systems Group
FDG = final data gap
FSDF = Former Sodium Disposal Facility
ft = feet
GPS = Global Positioning System
GRO = gasoline range organic
HSA = Historical Site Assessment
ID = identifier
ISF = interim storage facility
ISL = interim screening level
LUT = look up table
ND = nondetect
NBZ = Northern Buffer Zone
ND = nondetect
PAH = polyaromatic hydrocarbon
PCB = polychlorinated biphenyl
PCT = polychlorinated triphenyl
PID = photoionization detector
RFI = Facility Investigation Reports
RL = reporting limit
RMHF = Radioactive Material Handling Facility
SCTI = Sodium Component Test Installation
SIM = selective ion monitoring
SNAP = Streamlined New Acquisition Process
SRE = Sodium Reactor Experiment
STL = Systems Test Laboratory
TM = technical memorandum
TPH = total petroleum hydrocarbons
TR = trench
VOC = volatile organic compound
< = less than

**Table 2-2**

**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5A_DG-587 | Within Building 4023 Footprint | Location targets AST with unknown contents (Unknown-AT-L9-3) and linear magnetometer anomaly; positioned within medium toned mounded material identified in EPA TM and fill of unknown origin observed in borings within B4023. Bedrock is anticipated ~10 feet bgs. Conduct adjacent test pit for linear magnetometer anomaly and adjust 5-foot sample to target feature (or sample pit as appropriate). | 8 | At sample depth 0.5 ft, 100% fill - asphalt, concrete, and igneous/metamorphic gravel. At sample depth 5.5 ft, no fill indicated. | 5/22/2014 | Test Pit-Surface | SL-587-SA5A-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7470, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/22/2014 | Test Pit-Subsurface | SL-587-SA5A-TR-5.5 | Dioxins EPA 1613, Mercury EPA 7470, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/22/2014 | Test Pit-Subsurface Duplicate | SL-887-SA5A-TR-5.5 | TPH-GRO EPA 8015, Dioxins EPA 1613, Mercury EPA 7470, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| 5A_DG-636 | East of Building 4042 | Location targets geophysical anomaly; also characterizes operational area. Bedrock anticipated <10 feet bgs. Conduct adjacent test pit for geophysical anomaly. Adjust 5-foot sample to target feature (or sample pit as appropriate). | 8 | At sample depth 0.5 ft, 100% fill - minor asphalt and disturbed soil. At sample depth 3.5 ft, 100% fill - minor asphalt, minor brick material, and disturbed soil. At sample depth 7.5 ft, no fill indicated. | 5/23/2014 | Test Pit-Surface | SL-636-SA5A-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/23/2014 | Test Pit-Subsurface | SL-636-SA5A-TR-3.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/23/2014 | Test Pit-Subsurface | SL-636-SA5A-TR-7.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5A_DG-730 | Open Space West of Building 4453 | Location targets three point magnetometer anomalies and inline with interpreted drain remnant. Bedrock anticipated <10 feet bgs. Conduct adjacent test pit for three point magnetometer anomalies and interpreted drain remnant and adjust 5-foot sample to target feature (or sample pit as appropriate). | 11 | At sample depth 0.5 ft, 100% fill - disturbed soil. At sample depth 6.0 ft, no fill indicated. | 5/22/2014 | Test Pit-Surface | SL-730-SA5A-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7470, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/22/2014 | Test Pit-Subsurface | SL-730-SA5A-TR-6.0 | Dioxins EPA 1613, Mercury EPA 7470, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

**Table 2-2**
**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5B_DG-529 | South of B4012 | Targets AST with unknown contents; also targets southern portion of fill and potential leach field location. Excavate exploratory trench perpendicular to leach field orientation to investigate leach field location (inspect for signs of fill, gravel, leach lines, etc.). Analyze for corrosion inhibitors due to cooling tower operations in area. Analyze at depth due to potential fill, potential leach field impacts, and soil movement/fill. Fifteen foot sample targets native soil just above bedrock; analyze for full suite plus VOCs (SIM) to evaluate potential migration pathway to groundwater. | 11.75 | 100% fill at sample depth 0.5 ft: asphalt, plastic, concrete, gravel, clay pipe pieces. 100% fill at sample depth 2.0 ft: asphalt, metal, plastic, concrete, gravel, red concrete. 100% fill at sample depth 3.0 ft: asphalt, plastic, concrete, red concrete. | 5/28/2014 | Trench-Surface | SL-529-SA5B-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TIC EPA 8270, TPH-EFH EPA 8015 |
| | | | | | 5/28/2014 | Trench-Subsurface | SL-529-SA5B-TR-2.0 | TPH-GRO EPA 8015, Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TIC EPA 8270, TPH-EFH EPA 8015 |
| | | | | | 5/28/2014 | Trench-Subsurface | SL-529-SA5B-TR-3.0 | TPH-GRO EPA 8015, Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TIC EPA 8270, TPH-EFH EPA 8015 |
| | | | | | 5/28/2014 | Trench-Subsurface | SL-529-SA5B-TR-11.0 | TPH-GRO EPA 8015, Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TIC EPA 8270, TPH-EFH EPA 8015 |
| 5B_DG-693 | East of B4005/B4006 Leach Field | Excavate trench in east/west orientation to target leach line, linear geophysical anomaly, and northern terminus of above ground fuel line. Extend trench approximately 20 feet eastward to investigate the northern terminus of the fuel line (i.e., determine if the pipeline goes underground at this location and has been removed). Collect sample targeting geophysical anomaly; adjust 5 foot sample to target soil beneath anomaly if observed. Collect an additional sample at the terminus of the pipeline if subsurface piping is identified or soil staining observed. | 5.5 | At sample depth 0.5 ft, 100% fill - asphalt, metal, and concrete. At sample depth 3.0 ft, 100% fill - pieces of asphalt, gravel, pieces of clay pipe. At sample depth 3.5 ft, 10% fill - asphalt, metal, and concrete. At sample depth 5.0 ft, no fill indicated | 5/27/2014 | Trench-Surface | SL-693-SA5B-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/28/2014 | Trench-Subsurface | SL-693-SA5B-TR-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/27/2014 | Trench-Subsurface | SL-693-SA5B-TR-3.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/27/2014 | Trench-Subsurface | SL-693-SA5B-TR-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

**Table 2-2**
**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5B_DG-699 | Open Area South of SCTL PowerPak Interconnecting Facility | Excavate test pit to investigate linear geophysical anomaly. If observed, adjust 5 foot boring sample to target soil immediately beneath the anomaly. | 9.5 | 100% fill at sample depth 0.5 ft - small asphalt pieces on surface, gravel on surface. <5 % fill at sample depth 3.0 ft - gravel. No fill indicated at sample depth 8.0 ft. | 5/28/2014 | Test Pit-Surface | SL-699-SA5B-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/28/2014 | Test Pit-Subsurface | SL-699-SA5B-TR-3.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/28/2014 | Test Pit-Subsurface | SL-699-SA5B-TR-8.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5B_DG-707 | Former aboveground tank T-735 | Stepout for TPH detections to the south and dioxins/pesticides to the north; also targets fuel pipeline from T-735. | 3.5 | At sample depth 0.5 ft, 100% fill - concrete. At sample depth 3.0 ft, no fill indicated. | 5/27/2014 | Test Pit-Surface | SL-707-SA5B-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/27/2014 | Test Pit-Subsurface | SL-707-SA5B-TR-3.0 | TPH-GRO EPA 8015, Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Pesticides EPA 8081, pH EPA 9045, TPH-EFH EPA 8015 |
| 5C_DG-503 | Fill area east of B4015 | Complete characterization in downslope, eastern portion of fill area based on results observed in clearly contaminated fill area to the west. If fill observed, collect sample within fill and in top of native soil beneath fill to evaluate vertical migration. | 9.5 | 100% fill at sample depths 0.5 ft and 5.0 ft- disturbed soil. No fill indicated at sample depth 7.5 ft. | 5/29/2014 | Trench-Surface | SL-503-SA5C-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/29/2014 | Trench-Subsurface | SL-503-SA5C-TR-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/29/2014 | Trench-Subsurface | SL-503-SA5C-TR-7.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

**Table 2-2**
**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5C_DG-605 | Field east of B4100 | Representative sample targeting mounded material observed in EPA aerial photo review. Analytical suites selected since detected in other portions of the area. Excavate exploratory trench and collect samples based on field observation. Conditions should be observed in the trench and sample depths should target fill and native soil immediately beneath it. | 12 | 100% fill at sample depth 0.5 ft - metal, concrete, and gravel. 100% fill at sample depth 5.0 ft - concrete and gravel (cobbles, 4 in diameter). No fill indicated at sample depth 10.0 ft. | 5/29/2014 | Trench-Surface | SL-605-SA5C-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/29/2014 | Trench-Subsurface | SL-605-SA5C-TR-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/29/2014 | Trench-Subsurface | SL-605-SA5C-TR-10.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 5C_DG-646 | Southern Screening Area | The geophysical survey resulted in two magnetometer anomalies that could be fill up to 12 feet. This confirmed the "loose earth fill" in historical drawings. | 6.5 | 0-5 ft bgs: fill described as disturbed soil. | 6/4/2014 | Trench-Surface | SL-646-SA5C-TR-0.5 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |
| | | | | | 6/4/2014 | Trench-Subsurface | SL-646-SA5C-TR-5.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |
| 5C_DG-651 | Southern Screening Area | Excavate four trenches to evaluate vertical and lateral extent of potential fill and one of the magnetometer anomalies (5C_DG-563). Collect surface samples at each location to characterize area for potential aerial deposition from burning activities at the B100 Trench; analyze for PAHs, metals, and dioxins. Analyze all samples for the standard investigation suite (PAHs, PCBs/PCTs, metals, and TPH) and for documented chemicals used in historical Area IV operations (dioxins, Cr(VI), biphenyls, terphenyls, glycols, perchlorate, and energetics). | 15.5 | 0-15.0 ft bgs: fill described as 100% disturbed soil. | 5/30/2014 | Trench-Surface | SL-651-SA5C-TR-0.5 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860 |
| | | | | | 5/30/2014 | Trench-Subsurface | SL-651-SA5C-TR-5.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860 |
| | | | | | 5/30/2014 | Trench-Subsurface Duplicate | SL-951-SA5C-TR-5.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860 |

**Table 2-2**

**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5C_DG-651 | Southern Screening Area | The geophysical survey resulted in two magnetometer anomalies that could be fill up to 12 feet. This confirmed the "loose earth fill" in historical drawings.<br><br>Excavate four trenches to evaluate vertical and lateral extent of potential fill and one of the magnetometer anomalies (5C_DG-563). Collect surface samples at each location to characterize area for potential aerial deposition from burning activities at the B100 Trench; analyze for PAHs, metals, and dioxins. Analyze all samples for the standard investigation suite (PAHs, PCBs/PCTs, metals, and TPH) and for documented chemicals used in historical Area IV operations (dioxins, Cr(VI), biphenyls, terphenyls, glycols, perchlorate, and energetics). | 15.5 | 0-15.0 ft bgs: fill described as 100% disturbed soil. | 5/30/2014 | Trench-Subsurface | SL-651-SA5C-TR-10.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860 |
| | | | | | 5/30/2014 | Trench-Subsurface | SL-651-SA5C-TR-15.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860 |
| 5C_DG-653 | Southern Screening Area | | 15 | 0-10.0 ft bgs: fill described as 100% disturbed soil. | 6/2/2014 | Trench-Surface | SL-653-SA5C-TR-0.5 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |
| | | | | | 6/2/2014 | Trench-Subsurface | SL-653-SA5C-TR-5.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |
| | | | | | 6/2/2014 | Trench-Subsurface | SL-653-SA5C-TR-10.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |
| | | | | | 6/2/2014 | Trench-Subsurface | SL-653-SA5C-TR-15.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |

**Table 2-2**
**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5C_DG-655 | Southern Screening Area | The geophysical survey resulted in two magnetometer anomalies that could be fill up to 12 feet. This confirmed the "loose earth fill" in historical drawings.<br><br>Excavate four trenches to evaluate vertical and lateral extent of potential fill and one of the magnetometer anomalies (5C_DG-563). Collect surface samples at each location to characterize area for potential aerial deposition from burning activities at the B100 Trench; analyze for PAHs, metals and dioxins. Analyze all samples for the standard investigation suite (PAHs, PCBs/PCTs, metals, and TPH) and for documented chemicals used in historical Area IV operations (dioxins, Cr(VI), biphenyls, terphenyls, glycols, perchlorate, and energetics). | 8 | 0-5 ft bgs: fill described as 100% disturbed soil. | 6/4/2014 | Trench-Surface | SL-655-SA5C-TR-0.5 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |
| | | | | | 6/4/2014 | Trench-Subsurface | SL-655-SA5C-TR-5.0 | Dioxins EPA 1613, Energetics EPA 8330, Glycols EPA 8015, Herbicides EPA 8151, Hexavalent Chromium EPA 7196/7199, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, Perchlorate Confirmation EPA 6850/6860, Pesticides EPA 8081 |
| 6_DG-569 | West of Parking Lot 4513 Area | Stepout for TPH at L4BS1018 and SL-171-SA6. Conduct exploratory test pit to investigate linear terrain conductivity anomaly; if fill observed, collect sample at top of native immediately beneath fill. | 2.8 | At sample depth 0.5 ft, 100% fill - fragments of asphalt and clay pipe. At sample depth 2.5 ft, no fill indicated. | 5/20/2014 | Test Pit-Surface | SL-569-SA6-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/20/2014 | Test Pit-Subsurface | SL-569-SA6-TR-2.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 6_DG-570 | Parking Lot 4513 Area | Stepout for TPH at L4BS1018; analyze standard suite since characterizing area for potential storage. Conduct exploratory test pit to investigate linear magnetic anomaly; if pipe or buried metal observed, collect sample in soil beneath feature. | 8 | At sample depth 0.5 ft, 100% fill - fragments of asphalt and disturbed soil. At sample depth 2.0 ft, 100% fill - disturbed soil. At sample depth 6.0 ft, no fill indicated. | 5/20/2014 | Test Pit-Surface | SL-570-SA6-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/20/2014 | Test Pit-Subsurface | SL-570-SA6-TR-2.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/20/2014 | Test Pit-Subsurface | SL-570-SA6-TR-6.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

**Table 2-2**
**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 6_DG-686 | West of ESG Storage Yard | Location characterizes area west of ESG storage yard identified in 1988 Radiological Survey Report and targets surface water flow pathway at end of historical dirt road; also addresses potential aerial dispersion/deposition to the northwest of incinerator at B4040. Conduct exploratory test pit to investigate ground penetrating radar anomaly area; if fill with debris is present. Bedrock anticipated <2 ft. | 12.5 | None indicated. | 5/21/2014 | Test Pit-Surface | SL-686-SA6-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/21/2014 | Test Pit-Subsurface | SL-686-SA6-TR-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/21/2014 | Test Pit-Subsurface | SL-686-SA6-TR-11.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| 8_DG-534 | Northwest of ESADA | Conduct exploratory test pit to investigate hummocky area identified during 2008 debris survey. Location of test pit will be based on field observation of hummocky terrain. If fill, staining, debris, or other impacts are observed, collect sample targeting top of native soil. Bedrock anticipated ~5 feet bgs. If deep soils encountered, sample and place on hold pending shallow results. | 5.5 | At sample depth, 0.5 ft, 100% fill - wood fragments and white, porous fragments, possibly caliche. At sample depth, 5 ft, no fill indicated. | 5/19/2014 | Test Pit-Surface | SL-534-SA8-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/19/2014 | Test Pit-Subsurface | SL-534-SA8-TR-5.0 | TPH-GRO EPA 8015, Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| 8_DG-548 | West of the Solar Concentrator Facility | Conduct exploratory trench to investigate topographic low spot adjacent to the debris area identified during 2008 debris survey. Also targets terrain conductivity anomaly. Fill anticipated based on previous sampling in the area and historical aerial photographs. Excavate until top of native soils encountered. Bedrock anticipated >10 feet bgs. Collect and analyze samples at 5-foot intervals to bedrock beginning at 5 feet bgs. | 12.5 | None indicated. | 5/19/2014 | Trench-Surface | SL-548-SA8-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/19/2014 | Trench-Subsurface | SL-548-SA8-TR-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/19/2014 | Trench-Subsurface Duplicate | SL-848-SA8-TR-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/19/2014 | Trench-Subsurface | SL-548-SA8-TR-10.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

**Table 2-2**
**Soil Samples Designated to be Collected for Trenches - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 8_DG-611 | Southern Portion of Hillslope | Characterizes hillslope southeast of the ESADA and targets debris area identified during the 2008 debris survey. Conduct exploratory test pit to investigate debris area. If fill, staining, debris, or other impacts are observed, collect sample targeting top of native soil. Bedrock anticipated <10 feet bgs. If deep soils encountered, sample and place on hold pending shallow results. | 11.5 | None indicated. | 5/20/2014 | Test Pit-Surface | SL-611-SA8-TR-0.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015 |
| | | | | | 5/20/2014 | Test Pit-Subsurface | SL-611-SA8-TR-5.0 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |
| | | | | | 5/20/2014 | Test Pit-Subsurface | SL-611-SA8-TR-10.5 | Dioxins EPA 1613, Mercury EPA 7471, Metals EPA 6010, Metals EPA 6020, PAH EPA 8270 SIM, PCBs/PCTs EPA 8082, pH EPA 9045, TPH-EFH EPA 8015, TPH-GRO EPA 8015 |

**Notes & Abbreviations:**
Note: The sample number for a "duplicate sample" was increased by 300 (e.g. SB-530 and SB-830)
AST = Above-ground Storage Tank
bgs = below ground surface
Cr (VI) = hexavalent chromium
EFH = extractable fuel hydrocarbon
EPA = Environmental Protection Agency
ESA = Environmentally Sensitive Area
ESADA = Empire State Atomic Development Authority
ESG = Energy Systems Group
ft = feet
GPS = Global Positioning System
GRO = gasoline range organics
HSA = Historical Site Assessment
ID = identifier
ISF = interim storage facility
ISL = interim screening level
ND = nondetect
PAH = polyaromatic hydrocarbon
PCB = polychlorinated biphenyl
PCT = polychlorinated triphenyl
PID = photoionization detector
RFI = Facility Investigation Reports
RL = reporting limit
RMHF = Radioactive Material Handling Facility
SCTI = Sodium Component Test Installation
SIM = selective ion monitoring
SNAP = Streamlined New Acquisition Process
SRE = Sodium Reactor Experiment
TM = technical memorandum
TPH = total petroleum hydrocarbon
TR = trench
VOC = volatile organic compound
< = less than

**Table 2-3**

**Soil Samples Designated to be Collected for Soil Vapor Locations - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5ASV_DG-529 | Drainage Along 17th Street Northwest of B4005 | Targets confluence of multiple drainages receiving surface water runoff from operational areas to the northeast, north, and northwest, eventually discharging to the 17th Street Pond. Collect deepest sample just above bedrock to assess potential migration to groundwater. | 4.5 | None indicated. | 6/5/2014 | Subsurface | SVL-529-SA5A-SB-4.0-4.5 | VOC EPA 8260 |
| 5ASV_DG-552 | Open Field East of Coal Storage / Parking Area | Targets discharge from lined drainage into open field. | 8.75 | 1.5-2 ft bgs: fill described as disturbed native soil. | 6/5/2014 | Subsurface | SVL-552-SA5A-SB-1.5-2.0 | VOC EPA 8260 |
| 5ASV_DG-554 | East of Coal Storage / Parking Area at 17th and G Street | Targets unlined surface water pathway along the northeastern perimeter of Coal Storage/Parking Area; shallow bedrock anticipated (~5 ft). | 2 | 1.5-2 ft bgs: fill described as disturbed native soil. | 6/5/2014 | Subsurface | SVL-554-SA5A-SB-1.5-2.0 | VOC EPA 8260 |
| 5ASV_DG-566 | B4093 | Targets sanitary sewer pipe exit from B4093. Collect deepest sample just above bedrock to assess potential leak from sanitary sewer. | 3.5 | None indicated. | 6/4/2014 | Subsurface | SVL-566-SA5A-SB-3.0-3.5 | VOC EPA 8260 |
| 5ASV_DG-571 | Open Field South of B4453 | Representative location in open field; also positioned on former road. | 3 | None indicated. | 6/4/2014 | Subsurface | SVL-571-SA5A-SB-2.5-3.0 | VOC EPA 8260 |
| 5ASV_DG-574 | Open Field Southeast of B4453 | Representative location in open field south of 11th Street. | 2 | 1.5-2 ft bgs: fill described as reworked native soil. | 6/4/2014 | Subsurface | SVL-574-SA5A-SB-1.5-2.0 | VOC EPA 8260 |
| 5ASV_DG-576 | South of B4641 | Targets disturbed ground area identified in EPA HSA and visible in the 1995 aerial photo and potential leach field location. | 3 | 2.5-3 ft bgs: fill described as locally sourced fill. | 6/4/2014 | Subsurface | SVL-576-SA5A-SB-2.5-3.0 | VOC EPA 8260 |
| 5ASV_DG-611 | South of SE Drum Yard | Same as 5ASV_DG-556; shallow bedrock anticipated (~5 ft). | 1.85 | None indicated. | 6/9/2014 | Subsurface | SVL-611-SA5A-SB-1.35-1.85 | VOC EPA 8260 |
| 5ASV_DG-627 | South of B4029 | Representative location downslope of B4029. | 3.5 | None indicated. | 6/6/2014 | Subsurface | SVL-627-SA5A-SB-3.0-3.5 | VOC EPA 8260 |
| 5ASV_DG-630 | North of B4029 | Targets dirt road north of B4029 and upslope of Subarea 6. | 2 | None indicated. | 6/9/2014 | Subsurface | SVL-630-SA5A-SB-1.5-2.0 | VOC EPA 8260 |
| 5BSV_DG-501 | North of B4019 | Representative sample location in storage yard north of B4019. | 1.25 | 0.75-1.25 ft bgs: fill described as other. | 5/12/2014 | Subsurface | SVL-501-SA5B-SB-0.75-1.25 | VOC EPA 8260 |
| 5BSV_DG-521 | Slope south of B4025 | Location targets drainage along road and surface water pathway downslope of B4025 operations / south-side doorway. Shallow refusal in area; collect deeper samples if soil present. | 3.5 | 3.0-3.5 ft bgs: fill described as other. | 5/14/2014 | Subsurface | SVL-521-SA5B-SB-3.0-3.5 | VOC EPA 8260 |
| 5BSV_DG-532 | North of B4356 | One of four representative locations which provide overall characterization of fill material within deep excavation area around former Building 4536; based on previous sporadic elevated detects, fill material observed in borings to south, and geophysical anomalies (magnetic and terrain conductivity anomalies present). | 5 | None indicated. | 5/13/2014 | Subsurface | SVL-532-SA5B-SB-4.0-5.0 | VOC EPA 8260 |
| | | | | | 5/13/2014 | Subsurface Duplicate | SVL-832-SA5B-SB-4.0-5.0 | VOC EPA 8260 |
| 5BSV_DG-534 | Water Treatment Area West of B4356 | Location targets secondary containment trench and pit in SCTI water treatment area. | 3.5 | None Indicated. | 5/15/2014 | Subsurface | SVL-534-SA5B-SB-3.0-3.5 | VOC EPA 8260 |

**Table 2-3**
**Soil Samples Designated to be Collected for Soil Vapor Locations - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5BSV_DG-536 | Northwest Corner of SCTI | Location targets chemical storage area. Shallow refusal in area; collect deeper samples if soil present. | 5 | 1.5-2.0 ft bgs and 4.0-5.0 ft bgs: fill described as disturbed soil. | 6/11/2014 | Subsurface | SVL-536-SA5B-SB-1.5-2.0 | VOC EPA 8260 |
| 5BSV_DG-538 | South of B4355 | Targets open storage identified in EPA aerial photograph review. | 2 | None Indicated. | 5/15/2014 | Subsurface | SVL-538-SA5B-SB-1.5-2.0 | VOC EPA 8260 |
| 5BSV_DG-543 | B4358 | Targets "potentially saturated area" identified in EPA aerial photograph review. Collect deepest sample just above bedrock. | 2.5 | 2.0-2.5 ft bgs: fill described as other. | 5/14/2014 | Subsurface | SVL-543-SA5B-SB-2.0-2.5 | VOC EPA 8260 |
| 5BSV_DG-562 | North of B4005/4006 Leach Field | Same as 5BSV_DG-543. | 9 | None Indicated. | 6/10/2014 | Subsurface | SVL-562-SA5B-SB-8.0-9.0 | VOC EPA 8260 |
| 5BSV_DG-563 | Southwest of B4005/4006 Leach Field | Location targets drainage along 20th Street. | 8 | 4.5-5.0 ft bgs: fill described as disturbed soil. | 6/11/2014 | Subsurface | SVL-563-SA5B-SB-4.5-5.0 | VOC EPA 8260 |
| 5BSV_DG-566 | South of B4005/4006 Leach Field | Same as 5BSV_DG-564; also targets fuel pipeline and linear geophysical anomaly. | 2.5 | 2.0-2.5 ft bgs: fill described as other. | 5/15/2014 | Subsurface | SVL-566-SA5B-SB-2.0-2.5 | VOC EPA 8260 |
| 5BSV_DG-569 | Culvert at 20th and F Street | Targets drainage and culvert. | 3.5 | 2.5-3.0 ft bgs: fill described as disturbed soil. | 6/11/2014 | Subsurface | SVL-569-SA5B-SB-2.5-3.0 | VOC EPA 8260 |
| 5BSV_DG-576 | West of B4011 | Location targets open storage. | 4.3 | None Indicated. | 6/2/2014 | Subsurface | SVL-576-SA5B-SB-4.0-4.3 | VOC EPA 8260 |
| 5BSV_DG-577 | Southwest of B4011 | One of five samples targeting open storage area; also targets drainage along G Street. | 6.2 | None Indicated. | 6/4/2014 | Subsurface | SVL-577-SA5B-SB-5.3-5.8 | VOC EPA 8260 |
| 5BSV_DG-586 | South of B4007 | Location targets drainage and culvert leading to 17th Street Pond. | 4.25 | 3.75-4.25 ft bgs: fill described as reworked fill. | 6/4/2014 | Subsurface | SVL-586-SA5B-SB-3.75-4.25 | VOC EPA 8260 |
| | | | | | 6/4/2014 | Subsurface Duplicate | SVL-986-SA5B-SB-3.75-4.25 | VOC EPA 8260 |
| 5BSV_DG-602 | Fill Area West of 17th Street Pond | Same as 5BSV_DG-578. | 5 | None Indicated. | 6/3/2014 | Subsurface | SVL-602-SA5B-SB-4.5-5.0 | VOC EPA 8260 |
| 5CSV_DG-507 | Fill area in B4015 Field | Same as 5CSV_DG-503; also targets debris area. | 11.5 | 100% fill: locally sourced. | 5/28/2014 | Subsurface | SVL-507-SA5C-SB-5.0-6.0 | VOC EPA 8260 |
| 5CSV_DG-518 | South of SPTF | Location targets drainage observed in historical aerial photos along G Street to the south of SPTF. | 11.5 | 5.5-6.0 ft bgs: fill described as disturbed soil | 6/2/2014 | Subsurface | SVL-518-SA5C-SB-5.5-6.0 | VOC EPA 8260 |
| | | | | | 6/2/2014 | Subsurface | SVL-518-SA5C-SB-11.0-11.5 | VOC EPA 8260 |
| 5CSV_DG-525 | NW Side of B4100 | One of four samples representing area around B4100; addresses data gap at depth (previous sample from 5 feet bgs only) and elevated RLs in previous sampling (BHSV0009). Proposed depths based on refusal at 19.5 feet bgs in previous soil vapor boring. | 21 | None indicated. | 5/20/2014 | Subsurface | SVL-525-SA5C-SB-5.0-6.0 | VOC EPA 8260 |
| | | | | | 5/20/2014 | Subsurface | SVL-525-SA5C-SB-10.0-11.0 | VOC EPA 8260 |
| | | | | | 5/20/2014 | Subsurface | SVL-525-SA5C-SB-15.0-16.0 | VOC EPA 8260 |
| 5CSV_DG-531 | B100 Trench | Location targets B100 Trench excavation/backfill and addresses elevated RLs in previous sampling (BHSV02, BHSV1000). Sample depth based on refusal observed at nearby locations; collect deeper samples if soil is present. | 2.9 | 100% fill - soil backfill | 5/20/2014 | Subsurface | SVL-531-SA5C-SB-2.5-2.9 | VOC EPA 8260 |
| 5CSV_DG-545 | West of B4065 | Location targets open storage area identified during EPA aerial photo review. Refusal observed at approx. 3 feet in area; collect sample at 5 feet or just above bedrock. | 3.5 | 100% fill - locally sourced. | 5/28/2014 | Subsurface | SVL-545-SA5C-SB-3.0-3.5 | VOC EPA 8260 |

**Table 2-3**

**Soil Samples Designated to be Collected for Soil Vapor Locations - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 5CSV_DG-549 | Northwest of B4062 | Representative location in operational area. | 8.85 | 6.3-6.8 ft bgs: fill described as disturbed soil. | 6/10/2014 | Subsurface | SVL-549-SA5C-SB-6.3-6.8 | VOC EPA 8260 |
| 5CSV_DG-551 | Southern Screening Area | Representative location to characterize fill area southeast of the Building 56 Landfill. | 2.8 | 100% fill - reworked native soil. | 5/28/2014 | Subsurface | SVL-551-SA5C-SB-2.0-2.8 | VOC EPA 8260 |
| 5CSV_DG-557 | Southern Screening Area | Same as 5CSV_DG-551. | 3.5 | 100% fill - graded soil. | 5/29/2014 | Subsurface | SVL-557-SA5C-SB-3.0-3.5 | VOC EPA 8260 |
| 5CSV_DG-559 | Northwest of B4038 | Same as 5CSV_DG-558. | 3 | 100% fill - locally sourced. | 5/29/2014 | Subsurface | SVL-559-SA5C-SB-2.5-3.0 | VOC EPA 8260 |
| 5CSV_DG-561 | South of B4057 | Stepout for detects at locations near the dry well (SASV1005, SASV1006, SASV1007). | 11 | 10.5-11.0 ft bgs: fill described as disturbed soil. | 6/10/2014 | Subsurface | SVL-561-SA5C-SB-10.5-11.0 | VOC EPA 8260 |
| 5CSV_DG-563 | North side of B4057 | Location addresses potential storage on north wall of B4057 indicated by historical documentation (SNAP RFI Report, 2008). | 1.5 | 0.0-1.5 ft bgs: fill described as reworked native soil. | 6/2/2014 | Subsurface | SVL-563-SA5C-SB-1.0-1.5 | VOC EPA 8260 |
| 5DSV_DG-511 | B4020 Footprint | Targets a former sump in the southern portion of the B4020 basement. Also this location is one of three representative locations which provide overall characterization of fill material used to backfill the B4020 post-demolition excavation. | 10.5 | 100% fill - locally sourced | 5/22/2014 | Subsurface | SVL-511-SA5D-SB-4.5-5.5 | VOC EPA 8260 |
| | | | | 100% fill - locally sourced | 5/22/2014 | Subsurface Duplicate | SVL-811-SA5D-SB-4.5-5.5 | VOC EPA 8260 |
| 5DSV_DG-512 | B4020 Footprint | Targets former sump in the central portion of the B4020 basement. Also this location is one of three representative locations which provide overall characterization of fill material used to backfill the B4020 post-demolition excavation. | 17.75 | 100% fill - from local source | 5/21/2014 | Subsurface | SVL-512-SA5D-SB-5.0-6.0 | VOC EPA 8260 |
| 5DSV_DG-515 | East of B4020 | Targets the location of the former 3,000-gallon radioactive waste holdup tank. | 13.8 | 100% fill - imported from local source | 5/21/2014 | Subsurface | SVL-515-SA5D-SB-5.0-6.0 | VOC EPA 8260 |
| 5DSV_DG-532 | East of B4353 | Targets the B4353 Leach Field. | 4.5 | 100% fill - from local source. | 5/27/2014 | Subsurface | SVL-532-SA5D-SB-4.0-4.5 | VOC EPA 8260 |
| 5DSV_DG-536 | Northeast of B4363 | Targets drainage northeast of B4363 and ground scar identified in the EPA TM. | 2.3 | 100% fill - reworked native soil. | 5/23/2014 | Subsurface | SVL-536-SA5D-SB-1.8-2.3 | VOC EPA 8260 |
| 5DSV_DG-546 | Northwestern Portion of Pond Dredge Area | Characterizes the northwestern portion of the Pond Dredge Area. Also targets the estimated area of the drop zone of depleted uranium slugs reportedly dropped in the 1960s identified in the EPA TM. | 17 | 100% fill - from local source | 5/27/2014 | Subsurface | SVL-546-SA5D-SB-5.0-6.0 | VOC EPA 8260 |
| 5DSV_DG-550 | Eastern Portion of Pond Dredge Area | Characterizes the eastern portion of the Pond Dredge Area. Also targets light toned material identified in the EPA TM. | 18 | None indicated. | 5/27/2014 | Subsurface | SVL-550-SA5D-SB-5.0-6.0 | VOC EPA 8260 |
| 5DSV_DG-553 | South of B4363 | Targets ground scar identified in EPA TM. | 20 | None Indicated. | 6/3/2014 | Subsurface | SVL-553-SA5D-SB-4.5-5.5 | VOC EPA 8260 |
| | | | | | 6/3/2014 | Subsurface | SVL-553-SA5D-SB-9.0-10.0 | VOC EPA 8260 |
| | | | | | 6/3/2014 | Subsurface | SVL-553-SA5D-SB-14.0-15.0 | VOC EPA 8260 |
| | | | | | 6/3/2014 | Subsurface | SVL-553-SA5D-SB-19.0-20.0 | VOC EPA 8260 |
| 5DSV_DG-556 | South of B4353 | Targets medium toned mounded material identified in EPA TM. | 12 | None Indicated. | 6/3/2014 | Subsurface | SVL-556-SA5D-SB-4.5-5.5 | VOC EPA 8260 |
| | | | | | 6/3/2014 | Subsurface | SVL-556-SA5D-SB-10.0-11.0 | VOC EPA 8260 |
| 6SV_DG-527 | B4003 | Representative location in southern portion of B4003 footprint. | 3 | 2.0-3.0 ft bgs: fill described as small cut pipe, disturbed soil, asphalt, and concrete. | 6/9/2014 | Subsurface | SVL-527-SA6-SB-2.0-3.0 | VOC EPA 8260 |

**Table 2-3**
**Soil Samples Designated to be Collected for Soil Vapor Locations - Phase 3**

| Location ID | Location Description | Rationale / Comments | Boring Total Depth (ft bgs) | Fill Description | Sample Date | Sample Type | Sample Number | Laboratory Analyses |
|---|---|---|---|---|---|---|---|---|
| 6SV_DG-551 | Drainage South of SRE Pipeline Discharge | Location targets low spot in drainage south of SRE pipeline discharge and evaluates area as potential input location to groundwater contamination. | 5 | 4.0-5.0 ft bgs: fill described as minor asphalt, and disturbed soil. | 6/10/2014 | Subsurface | SVL-551-SA6-SB-4.0-5.0 | VOC EPA 8260 |
| 6SV_DG-574 | Northwest Portion of Subarea 6 South | Same as 6SV_DG-571. | 4.3 | None indicated. | 6/9/2014 | Subsurface | SVL-574-SA6-SB-3.8-4.3 | VOC EPA 8260 |
| 6SV_DG-577 | Southeast Portion of Subarea 6 South | Location targets area downslope of SPA operational area. | 2 | None indicated. | 6/11/2014 | Subsurface | SVL-577-SA6-SB-1.0-2.0 | VOC EPA 8260 |
| 8SV_DG-504 | North of FSDF | Characterizes vapor in native soil adjacent to the 2000 Interim Measure excavation area. Location selected is north of the Former Lower Pond and adjacent to elevated detections of VOCs in a soil vapor sample collected within the backfill. | 2.5 | None indicated. | 5/16/2014 | Subsurface | SVL-504-SA8-SB-2.0-2.5 | VOC EPA 8260 |
| 8SV_DG-517 | North of ESADA | Characterizes the area south of FSDF that was graded during the 2000 Interim Measures. | 16.5 | None indicated. | 5/19/2014 | Subsurface | SVL-517-SA8-SB-5.0-6.0 | VOC EPA 8260 |
| | | | | | 5/19/2014 | Subsurface | SVL-517-SA8-SB-10.0-11.0 | VOC EPA 8260 |
| | | | | | 5/19/2014 | Subsurface | SVL-517-SA8-SB-15.5-16.5 | VOC EPA 8260 |
| 8SV_DG-519 | North of ESADA | Targets the former pipeline running from former Building 4814 to FSDF identified in a historical drawing. | 8 | 7.5-8.0 ft bgs: fill described as other. | 5/16/2014 | Subsurface | SVL-519-SA8-SB-7.5-8.0 | VOC EPA 8260 |
| 8SV_DG-524 | ESADA | Characterizes the ESADA Former Pistol Range. | 11.5 | None indicated. | 5/19/2014 | Subsurface | SVL-524-SA8-SB-4.5-5.5 | VOC EPA 8260 |
| 8SV_DG-528 | Solar Concentrator Facility | Targets the former footprint of the Solar Concentrator Facility. | 19.5 | None indicated. | 5/19/2014 | Subsurface | SVL-528-SA8-SB-5.0-6.0 | VOC EPA 8260 |
| | | | | | 5/19/2014 | Subsurface | SVL-528-SA8-SB-11.0-12.0 | VOC EPA 8260 |
| 8SV_DG-532 | Northwest of B4009 | Characterizes the unlined drainage downstream of B4009 and leach field to assess for potential contaminant migration. | 4 | None indicated. | 6/12/2014 | Subsurface | SVL-532-SA8-SB-3.5-4.0 | VOC EPA 8260 |
| 8SV_DG-546 | North of FSDF | Targets the drainage downstream of FSDF. | 4.9 | None indicated. | 6/12/2014 | Subsurface | SVL-546-SA8-SB-4.4-4.9 | VOC EPA 8260 |
| | | | | | 6/12/2014 | Subsurface Duplicate | SVL-846-SA8-SB-4.4-4.9 | VOC EPA 8260 |

**Notes & Abbreviations:**
Note: The sample number for a "duplicate sample" was increased by 300 (e.g. SB-530 and SB-830)
bgs = below ground surface
B4005 = Building 4005
Cr (VI) = hexavalent chromium
DG_ = Data Gap
ESA = Environmentally Sensitive Area
ESADA = Empire State Atomic Development Authority
ft = feet
FSDF = Former Sodium Disposal Facility
HSA = Historical Site Assessment
ID = identifier
ISF = interim storage facility
ISL = interim screening level
ND = nondetect
RFI = Facility Investigation Reports
RL = reporting limit
RMHF = Radioactive Material Handling Facility
SCTI = Sodium Component Test Installation
SIM = selective ion monitoring
SNAP = Streamlined New Acquisition Process
SPA = Storable Propellants Area
SPTF = Sodium Pump Test Facility
SRE = Sodium Reactor Experiment
SVL = Soil Vapor Location
TM = Technical Memorandum
TPH = total petroleum hydrocarbon
VOC = volatile organic compound
< = less than

## 2.1 Surface Sampling

**Go-Back Samples and Soil Vapor Location Samples**

Prior to the collection of the surface soil samples for Go-Backs, the surface of each sample area was prepared by removing leaves, grass, and any other surface debris. Sixty-six surface samples, including field duplicates, were collected at 63 locations for the Go-Back sampling event.

Fifty-four of the 66 Go-Back surface samples were collected from the ground surface to 6 inches bgs using a slide hammer equipped with a 2-inch diameter and 6-inch long stainless steel sample liner in accordance with SSFL SOP 2 (Surface Soil Sampling) of the Master FSP (CDM Smith 2012a). The slide hammer sampler was pounded into the soil until the top of the sampler was flush with the ground surface. The sampler was then removed from the soil. The sample sleeve was removed from the sampler and both ends capped with a Teflon® liner and a plastic cap.

The remaining 12 surface samples were collected using a direct push technology (DPT) rig in accordance with SSFL SOP 4 (DPT Sampling) of the Master FSP (CDM Smith 2012a). Stainless steel sleeves measuring 5 ¾ inches by 1 ¾ inches were inserted into the DPT split spoon sampler and pushed to the required sample interval. Upon removal from the DPT sampler, each liner was capped on both ends with a Teflon® liner and plastic cap.

After the samples were collected and labeled "Top" and "Bottom," adhesive sample labels, completed with all sampling information, were affixed to all sample sleeves and jars, which were then placed into plastic zip top bags and stored in a cooler with double bagged ice until the samples were relinquished to the project sample coordinator or field team leader (FTL). Each surface sample was analyzed for the methods identified for each sample location as indicated in the addendums listed in Section 1.

No surface samples were collected during the Soil Vapor Location sampling because the contaminants of interest, total petroleum hydrocarbons (TPHs) and VOCs, volatize at the surface and very shallow depths. Appendix H presents the MWH Soil Vapor Report.

## 2.2 Subsurface Sampling

**Go-Back Samples and Soil Vapor Location Samples**

Collection of 23 subsurface soil samples for Go-Backs and Soil Vapor Locations were performed in accordance with SSFL SOP 3 (Subsurface Soil Sampling with Hand Auger) of the Master FSP (CDM Smith 2012a) using a hand auger and slide hammer equipped with stainless steel sleeves. Eighteen subsurface samples, including field duplicates, were collected from 16 locations inaccessible to the DPT rig in the Go-Back sample event via hand auger and slide hammer. Five subsurface samples were collected from 4 locations during the Soil Vapor Location sample event via hand auger and slide hammer.

Each location was augered to the required sample depth and every foot of augered soil was retrieved to the surface, placed in plastic bags and screened using the Micro R, Pancake, and PID. Any EnCore® samplers needed were filled from the bottom end of the stainless steel sleeve inside the slide hammer and the sleeve was capped and submitted for the required analyses. This process was repeated at those locations where deeper soils were encountered.

After all samples were collected from the boring, the hand augered hole was backfilled with the soil cuttings and topped off with a bentonite chip seal, if necessary. At locations in asphalt, an asphalt patch was placed on top of the bentonite.

Collection of subsurface soil samples at easily accessible locations for Go-Backs and Soil Vapor Locations was performed by a California-licensed DPT subcontractor under CDM Smith oversight and in accordance with SSFL SOP 4 (DPT Sampling) of the Master FSP (CDM Smith 2012a). Thirty subsurface samples were collected from 28 locations during the Go-Back sample event. Sixty-five subsurface samples were collected from 53 locations during the Soil Vapor Location sample event. Soil cores were collected using the DPT dual-tube sampling method, which consists of a 2-inch outer steel drive casing and an inner 1¾-inch diameter acetate soil sampling sleeve. After the liner was retracted from the core barrel, it was opened lengthwise with a cutting tool. Samples were collected from the acetate sleeve at the depths specified in Table 1 of the Final Phase 3 Data Gap Analysis for Subareas 5B, C, 3/6 and 7 and Subareas 5A, 5D, 8 and Northern Buffer Zone TMs. Samples were also collected from any depths where the PID detected concentrations above background or where there was visual evidence of possible contamination.

Soil for TPH-Gasoline Range Organics (GRO) and TPH-Extractable Fuel Hydrocarbons (EFH) analyses was collected from the acetate sleeve using EnCore® samplers. Subsurface soil for semivolatile organic compound (SVOC) polycyclic aromatic hydrocarbon (PAH), and polychlorinated biphenyl/polychlorinated triphenyl (PCB/PCT) analyses was removed from the acetate sleeve in a manner causing minimal soil disturbance and placed into glass jars ranging from four ounces to 16 ounces depending on volume of soil needed for the required analyses. Soil for all non-volatile analyses was also placed into glass jars. Adhesive sample labels were completed with all sampling information and affixed to each sample jar, and then placed into plastic zip top bags. The EnCore® samplers were placed into the bags in which they were received (three samplers per bag), and the sample label affixed to the outside of the bag. All jars and EnCore® samplers were placed in a cooler with double bagged ice.

## 2.3 Trench and Test Pit Sampling

Trenching was performed by MWH. Completion of trenches and collection of trench samples was conducted in accordance with SOP 5 (Backhoe Trenching/ Test Pits for Sample Collection) of the Master FSP (CDM Smith 2012). All trench locations were located using a GPS device and adjusted according to field observations. Geophysical clearance of subsurface utilities, geophysical investigations of subsurface features and clearance of any biological or cultural features were conducted prior to trenching. Nineteen trenches were completed using a Deere 310 SJ backhoe. Thirty-eight subsurface soil samples and 19 surface samples were collected directly from the backhoe bucket after screening according to SOP 7 (Field Measurement of Residual Radiation) of the Master FSP (CDM Smith 2012) and SOP 6 (Field Measurement of Total Organic Vapors) of the Master FSP (CDM Smith 2012). A trench log was prepared detailing description of the soil, bedrock and targeted features in accordance with SOP 9 (Lithologic Logging) of the Master FSP (CDM Smith 2012).

After the samples were collected, adhesive sample labels, completed with all sampling information, were affixed to all sample sleeves and jars, which were then placed into plastic zip top bags and stored in a cooler with double bagged ice until the samples were relinquished to the project sample coordinator or FTL. Any soil collected for TPH-GRO and EFH analyses were collected directly from the backhoe bucket using EnCore® samplers.

Full details for trench sampling are included in the Technical Memorandum-Summary of Phase 3 Trench Investigation Activities in Area IV (MWH, Inc. 2014) presented in Appendix G.

## 2.4 Sample Handling

All soil samples were relinquished by the field sampler or geologist to CDM Smith's FTL or sample coordinator. The FTL or sample coordinator reviewed the completed FSDS for each submitted soil sample and ensured that the sample labels were legible and correct and the sample labels matched the information on the FSDS. Any discrepancies were discussed with the field samplers and corrections to the sample labels and/or FSDS were made as needed. All sample labels were covered with clear tape, the sleeves and jars placed back into their plastic zip top bag, and refrigerated.

All sampling information on the FSDS was input into the Scribe electronic database by the sampling coordinator and one or more chain-of-custody (CoC) forms were generated at the end of the day from the database. The FTL reviewed each CoC, corrected any discrepancies, and reprinted the CoC, as needed. All CoCs for the Go-Back, Trench and Soil Vapor Location samples for Phase 3 sampling activities are presented in Appendix F. Each completed CoC was signed by the sampler and the FTL as the individual responsible for release of the samples to the courier. All samples were packed into coolers and shipped in accordance with SSFL SOP 11 (Packaging and Shipping Environmental Samples).

## 2.5 Field Quality Control Procedures

Quality control (QC) samples collected in the field included field duplicates, matrix spike (MS)/matrix spike duplicate (MSD) samples, equipment rinsate blanks and field blanks. Trip blanks filled with laboratory analyte-free water were sent to the site from the laboratory and were submitted unopened with any samples to be analyzed for all applicable methods.

### 2.5.1 Field Duplicates and MS/MSD Samples

Both the field duplicates and MS/MSD samples were to be collected at a frequency of one per 20 (five percent) parent samples soil samples collected. The field duplicate and MS/MSD samples are collected from the same location. The duplicate samples were submitted to the laboratory as separate (and blind) from the parent samples. The MS/MSD samples are additional volume of the parent samples collected in triple volume for the DPT subsurface samples; a double volume of soil was sufficient for the surface and hand-augered MS/MSD samples.

During sampling for Go-Backs, Trenches and Soil Vapor Locations, a total of six Go-Back, three Trench and four Soil Vapor Location field duplicate/MS/MSD samples were collected equating to approximately 5.2 to 5.7 percent for each sample type. On an individual method basis, the five percent goal was exceeded for all analyses.

### 2.5.2 Equipment Rinsate Blank Samples

Equipment rinsate blanks were collected weekly for both surface and subsurface soil samples regardless of the number of soil samples collected.

### 2.5.3 Field Blank Samples

Field blanks were collected once for each lot number of ASTM International Type II water that was used for decontamination. One field blank was collected during Go-Backs, Trenches and Soil Vapor

Locations Phase 3 sampling. Other field blanks are associated with Go-Backs, Trenches and Soil Vapor Location samples but were collected prior to the sampling conducted in these subareas.

### 2.5.4 Decontamination of Sampling Equipment

All sampling and drilling equipment were decontaminated by the DPT subcontractor and/or CDM Smith staff before and after completing each sample. This included the hand auger equipment, slide hammer equipment, split spoon sampler and drill rods for the DPT, Encore® sampler and other sampling equipment. All sampling equipment was cleaned with the triple rinse method before sampling at the next depth; cleaning was also done between locations. The external surfaces of the equipment were washed with potable water and Alconox®, or equivalent laboratory-grade detergent. Equipment was scrubbed until all visible dirt, grime, grease, oil, loose paint, rust flakes, etc., was removed. The equipment was then rinsed with potable water.

Any surface sampling equipment that came into contact with soil including the auger bucket and the slide hammer sampler cup and cap (that holds the stainless steel sleeves in place while sampling) were decontaminated as follows:

- Washed with a solution of potable water and Alconox®, or equivalent laboratory-grade detergent
- Rinsed thoroughly with potable water
- Given a final rinse with ASTM International Type II water

If the sampling device was not used immediately after being decontaminated, it was placed in a sealed plastic bag.

## 2.6 Analytical Laboratory Methods and Procedures

### 2.6.1 Analytical Methods

The Go-Backs, Trenches and Soil Vapor Location Phase 3 soil samples were subject to analysis using at least one of the following analytical methods:

- Metals using U.S. Environmental Protection Agency (EPA) Methods 6010C/6020A, 7471B (mercury), and 7199 (chromium VI)
- Soil pH using EPA Method 9045M
- SVOCs using EPA Method 8270D
- PAHs using EPA Method 8270D selective ion monitoring (SIM)
- VOCs using EPA Method 8260B
- 1,4-Dioxane using EPA Method 8260B SIM
- Perchlorate using EPA Method 6850
- Pesticides using EPA Method 8081B
- Herbicides using EPA Method 8151A

- PCBs/PCTs using EPA Method 8082A
- Dioxins/furans using EPA Method 1613B
- Formaldehyde using EPA Method 8315A
- Terphenyls using EPA Method 8015B
- Glycols using EPA Method 8015C/8015B
- TPH-EFH using EPA Method 8015M
- TPH-GRO using EPA Method 8015M
- Energetics using EPA Method 8330A

Eurofins Lancaster Laboratory in Lancaster, Pennsylvania analyzed all parameters for the Go-Backs, Trenches and Soil Vapor Location Phase 3 samples. The laboratory was selected using a competitive procurement process.

## 2.7 Data Review Processes

Analytical data produced by the analytical laboratory (Eurofins Lancaster Laboratory) were subject to multiple review steps to coincide with the start of distinct tasks. These steps were performed in a timely manner to ensure appropriate feedback and correction of errors. These steps included:

- Cross-reference check of sample CoC documents against the laboratory acknowledgement of sample receipt form. The laboratory acknowledgement of sample receipt was typically transmitted to the data manager via e-mail two to three days after sample receipt and login and includes a summary of the requested analyses to be performed per sample. Sample log-in errors were identified and corrected at this step.
- Tracking of sample collection, receipt, and laboratory sample delivery group (SDG) numbers on a sample tracking spreadsheet. This spreadsheet also includes field QC sample information, sample location coordinates, and required laboratory deliverables including reports, electronic data deliverables, raw data, and the status of validation.
- Laboratory consultation with the project chemists on data quality issues during sample analyses such as missed holding times, poor spike recoveries, etc. These issues are discussed between the project chemists and the laboratory and are resolved based on technical merit and determined if usable in the evaluation.

Upon receipt of the laboratory report (delivered via e-mail), a preliminary review of the data was performed. This review consisted of:

- Reconciliation of the reported analyses against the analyses that were requested on the CoCs.
- Review of the laboratory case narratives. The case narrative identifies and explains quality issues encountered during the analysis of the samples. Quality issues may include (but are not limited to) expired holding times, poor spike recoveries in matrix or batch-specific QC samples, instrument calibration exceedances, and blank contamination.

- Review of the laboratory-specific QC data. These data are provided by the laboratory in summary form. Any unanticipated deviations from the project or method-specific criteria are reconciled with the laboratory at this stage.

## 2.8 Deviations from the Master FSP

During the Phase 3 field sampling and analytical programs, modifications from the procedures detailed in the Master FSP (CDM Smith 2012a) and project SOPs were required. These modifications and associated resolutions were discussed with the FTL, the project manager, and in some cases with the DTSC representative prior to implementation. In other instances, deviations effected in the field were not discussed with the project manager or DTSC prior to their implementation. These deviations are described in the following subsections.

### 2.8.1 Field Sampling

The SSFL SOP 2 (Surface Soil Sampling) requires soil to be collected in decontaminated stainless steel sleeves during soil sample collection by slide hammer. Due to loose, sandy soil conditions that prevented soil from remaining within the stainless steel sleeve, 13 samples for Go-Backs were collected and placed directly into glass jars. The sample numbers are as follows:

- FDG2-SL-1175-SA5A-SB-2.0-3.0
- FDG2-SL-561-NBZ-SB-0.0-0.5
- FDG2-SL-562-NBZ-SB-0.0-0.5
- FDG2-SL-576-NBZ-SB-2.0-3.0
- FDG2-SL-628-SA8-SB-14.0-15.0
- FDG2-SL-630-SA8-SB-4.0-5.0
- FDG2-SL-875-SA5A-SB-0.0-0.5
- FDG2-SL-875-SA5A-SB-2.0-3.0
- FDG2-SL-876-SA5A-SB-0.0-0.5
- FDG2-SL-876-SA5A-SB-4.0-5.0
- FDG2-SL-877-SA5A-SB-0.0-0.5
- FDG2-SL-877-SA5A-SB-3.0-4.0
- FDG2-SL-511-SA5C-SB-2.0-3.0

### 2.8.2 Analytical

No analytical deviations were encountered during analyses of samples collected for Phase 3 Go-Backs, Trenches and Soil Vapor Locations.

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# Section 3

# Go-Backs, Trenches and Soil Vapor Locations Phase 3 Soil Sample Analytical Results

Because this TM only provides the analytical results, data in this section are presented in a summary fashion. Tables 3-1, 3-2 and 3-3 summarize the Go-Backs, Trenches and Soil Vapor Location Phase 3 surface, subsurface and combined soil sample data respectively. The tables detail the chemicals analyzed, their associated chemical abstract service (CAS) number, frequency of detection, minimum and maximum detected concentrations, range of observed detection limits and reporting limits (RLs), and the sample location where the maximum concentration of each analyte was detected. If two locations for the maximum concentration are listed and only one maximum concentration value is provided, this indicates that the concentration was the same at the specified depth at both locations.

Appendix A provides tables for all validated data by analytical method and sample location. Data validation qualifier codes and their definitions are presented in these tables. Appendix B provides the summary analytical data reports as received from Eurofins Lancaster Laboratory. Appendix C presents the data usability and assessment report (DUAR), which details specific qualifications of sample results along with all validation reports. Appendix D is the master database of all sample results including the data validation qualifiers. Appendix E provides the FSDS and boring logs. Appendix F provides the CoC records for all of the samples submitted to Eurofins Lancaster Laboratory. Appendices G and H provide the MWH reports for Trench sampling and Soil Vapor sampling, respectively.

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**Table 3-1**
**Summary of Analytical Results for Chemicals - Validated Data**
**Surface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 17 / 20 | 0.938 J Z | 2670 J *# | 0.015 - 0.283 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 17 / 20 | 0.33 J Z | 282 | 0.00525 - 0.11 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 11 / 20 | 0.088 J Z | 25.5 | 0.0103 - 0.14 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 12 / 20 | 0.129 J Z | 26 | 0.0158 - 0.153 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 14 / 20 | 0.1 J Z | 6.99 | 0.017 - 0.133 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 17 / 20 | 0.095 J Z | 126 | 0.0159 - 0.153 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 12 / 20 | 0.038 J Z | 10.1 | 0.0141 - 0.136 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 18 / 20 | 0.149 J Z | 52.2 | 0.0156 - 0.149 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 12 / 20 | 0.068 J Z | 1.88 J Z | 0.0176 - 0.129 | 4.9 - 6 | ng/kg | 5D_DG-586 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 11 / 20 | 0.315 J Z | 4.19 J Z | 0.0075 - 0.0897 | 4.9 - 6 | ng/kg | 5D_DG-584 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 15 / 20 | 0.044 J Z | 11.8 | 0.0181 - 0.278 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 10 / 20 | 0.063 J Z | 21.7 | 0.014 - 0.129 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 10 / 20 | 0.11 J Z | 3.07 J Z | 0.00758 - 0.0844 | 4.9 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 6 / 20 | 0.087 J Z | 1.52 | 0.0136 - 0.201 | 0.98 - 1.2 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 14 / 20 | 0.064 J Z | 1.64 | 0.0147 - 0.152 | 0.98 - 1.2 | ng/kg | 5D_DG-584 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDD | 3268-87-9 | 19 / 20 | 4.52 J Z | 26100 J *# | 0.0148 - 0.171 | 9.8 - 12 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDF | 39001-02-0 | 15 / 20 | 0.878 J Z | 584 | 0.00971 - 0.0863 | 9.8 - 12 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Formaldehyde | Formaldehyde | 50-00-0 | 0 / 3 | - | - | 1300 - 13000 | 2100 - 21000 | µg/kg | - | - | - | - |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 0 / 2 | - | - | 45 - 45 | 91 - 92 | µg/kg | - | - | - | - |
| Herbicides | 2,4,5-T | 93-76-5 | 0 / 1 | - | - | 0.83 - 0.83 | 1.7 - 1.7 | µg/kg | - | - | - | - |
| Herbicides | 2,4-D | 94-75-7 | 0 / 1 | - | - | 12 - 12 | 37 - 37 | µg/kg | - | - | - | - |
| Herbicides | 2,4-DB | 94-82-6 | 1 / 1 | 16 J Z, *# | 16 J Z, *# | 6.3 - 6.3 | 17 - 17 | µg/kg | NBZ_DG-559 | LL | 8151A | 0 - 0.5 |
| Herbicides | Dicamba | 1918-00-9 | 0 / 2 | - | - | 4.1 - 4.1 | 12 - 12 | µg/kg | - | - | - | - |
| Herbicides | Dichlorprop | 120-36-5 | 0 / 1 | - | - | 9.1 - 9.1 | 17 - 17 | µg/kg | - | - | - | - |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 0 / 1 | - | - | 9.1 - 9.1 | 24 - 24 | µg/kg | - | - | - | - |
| Herbicides | MCPA | 94-74-6 | 0 / 2 | - | - | 770 - 770 | 2500 - 2500 | µg/kg | - | - | - | - |
| Herbicides | MCPP | 93-65-2 | 0 / 2 | - | - | 760 - 760 | 2500 - 2500 | µg/kg | - | - | - | - |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 0 / 1 | - | - | 0.76 - 0.76 | 1.7 - 1.7 | µg/kg | - | - | - | - |
| Mercury | Mercury | 7439-97-6 | 27 / 33 | 0.012 J Z | 0.375 | 0.0095 - 0.0121 | 0.0158 - 0.0202 | mg/kg | NBZ_DG-566 | LL | 7471B | 0 - 0.5 |
| Metals | Aluminum | 7429-90-5 | 33 / 33 | 6530 | 26800 | 4.57 - 8.85 | 39 - 49.1 | mg/kg | NBZ_DG-578 | LL | 6010C | 0 - 0.5 |
| Metals | Antimony | 7440-36-0 | 0 / 33 | - | - | 0.332 - 0.908 | 3.9 - 4.91 | mg/kg | - | - | - | - |
| Metals | Arsenic | 7440-38-2 | 32 / 33 | 0.941 J Z | 28.9 | 0.645 - 0.859 | 3.9 - 4.91 | mg/kg | NBZ_DG-562 | LL | 6010C | 0 - 0.5 |
| Metals | Barium | 7440-39-3 | 33 / 33 | 39.2 | 132 | 0.0322 - 0.0405 | 0.976 - 1.23 | mg/kg | NBZ_DG-574 | LL | 6010C | 0 - 0.5 |
| Metals | Beryllium | 7440-41-7 | 33 / 33 | 0.281 J Z | 1.38 | 0.0654 - 0.0822 | 0.976 - 1.23 | mg/kg | NBZ_DG-578 | LL | 6010C | 0 - 0.5 |
| Metals | Boron | 7440-42-8 | 9 / 33 | 1.26 J Z | 10.6 | 0.82 - 1.03 | 9.76 - 12.3 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |
| Metals | Cadmium | 7440-43-9 | 12 / 33 | 0.1 J Z | 1.26 | 0.0332 - 0.0932 | 0.976 - 1.23 | mg/kg | 5D_DG-584 | LL | 6010C | 0 - 0.5 |
| Metals | Calcium | 7440-70-2 | 33 / 33 | 2170 J E, A 2170 | 38400 | 3.26 - 4.1 | 19.5 - 24.5 | mg/kg | 5C_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Chromium | 7440-47-3 | 33 / 33 | 8.11 | 33.3 | 0.111 - 0.196 | 2.93 - 3.68 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |
| Metals | Cobalt | 7440-48-4 | 33 / 33 | 2.44 | 10.6 | 0.0966 - 0.121 | 0.976 - 1.23 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |
| Metals | Copper | 7440-50-8 | 33 / 33 | 5.23 | 37.5 | 0.283 - 0.356 | 1.95 - 2.45 | mg/kg | 5D_DG-584 | LL | 6010C | 0 - 0.5 |
| Metals | Iron | 7439-89-6 | 33 / 33 | 12000 | 36900 | 3.36 - 19.1 | 39 - 211 | mg/kg | NBZ_DG-578 | LL | 6010C | 0 - 0.5 |
| Metals | Lead | 7439-92-1 | 33 / 33 | 4.19 | 23.6 | 0.488 - 0.613 | 2.93 - 3.68 | mg/kg | NBZ_DG-568 | LL | 6010C | 0 - 0.5 |
| Metals | Lithium | 7439-93-2 | 33 / 33 | 14.2 | 45 | 0.33 - 0.68 | 3.9 - 4.9 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |
| Metals | Magnesium | 7439-95-4 | 33 / 33 | 2670 | 8620 | 1.63 - 2.05 | 9.76 - 12.3 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |
| Metals | Manganese | 7439-96-5 | 33 / 33 | 141 | 431 | 0.081 - 0.102 | 0.976 - 1.23 | mg/kg | 5C_DG-748 | LL | 6010C | 0 - 0.5 |
| Metals | Molybdenum | 7439-98-7 | 17 / 33 | 0.18 J Z | 10.7 | 0.166 - 0.209 | 1.95 - 2.45 | mg/kg | NBZ_DG-562 | LL | 6010C | 0 - 0.5 |
| Metals | Nickel | 7440-02-0 | 33 / 33 | 4.86 | 21.6 J A | 0.127 - 0.159 | 1.95 - 2.45 | mg/kg | 5D_DG-586 | LL | 6010C | 0 - 0.5 |
| Metals | Phosphorus | 7723-14-0 | 33 / 33 | 184 | 608 | 0.322 - 3.55 | 9.76 - 12.3 | mg/kg | 5A_DG-875 | LL | 6010C | 0 - 0.5 |
| Metals | Potassium | 7440-09-7 | 33 / 33 | 1740 | 5720 J Q | 8.14 - 13.7 | 97.6 - 123 | mg/kg | NBZ_DG-574 | LL | 6010C | 0 - 0.5 |
| Metals | Selenium | 7782-49-2 | 30 / 33 | 0.1 J Z | 1.04 | 0.0976 - 0.123 | 0.39 - 0.491 | mg/kg | NBZ_DG-562 | LL | 6020A | 0 - 0.5 |
| Metals | Silver | 7440-22-4 | 27 / 33 | 0.026 J Q, E, Z | 3.33 | 0.0201 - 0.0319 | 0.195 - 0.245 | mg/kg | 5D_DG-584 | LL | 6020A | 0 - 0.5 |
| Metals | Sodium | 7440-23-5 | 33 / 33 | 51.8 J Z | 325 | 16.3 - 20.5 | 97.6 - 123 | mg/kg | 5B_DG-843 | LL | 6010C | 0 - 0.5 |
| Metals | Strontium | 7440-24-6 | 33 / 33 | 14.3 J E, Q | 79.2 | 0.0576 - 0.0834 | 0.39 - 0.491 | mg/kg | 5C_DG-748 | LL | 6020A | 0 - 0.5 |
| Metals | Thallium | 7440-28-0 | 33 / 33 | 0.151 J Z | 0.425 | 0.0293 - 0.0368 | 0.195 - 0.245 | mg/kg | NBZ_DG-581 | LL | 6020A | 0 - 0.5 |
| Metals | Tin | 7440-31-5 | 0 / 33 | - | - | 0.215 - 0.455 | 9.76 - 12.3 | mg/kg | - | - | - | - |
| Metals | Titanium | 7440-32-6 | 33 / 33 | 585 | 1680 | 0.166 - 0.209 | 0.976 - 1.23 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |

**Table 3-1**
**Summary of Analytical Results for Chemicals - Validated Data**
**Surface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals | Vanadium | 7440-62-2 | 33 / 33 | 20.1 | 67.6 | 0.0917 - 0.159 | 0.976 - 1.23 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |
| Metals | Zinc | 7440-66-6 | 33 / 33 | 32.4 | 178 J Q, E | 0.195 - 0.275 | 3.9 - 4.91 | mg/kg | 5C_DG-511 | LL | 6010C | 0 - 0.5 |
| Metals | Zirconium | 7440-67-7 | 13 / 33 | 0.89 J Z | 7.09 | 0.816 - 1.03 | 4.88 - 6.13 | mg/kg | NBZ_DG-581 | LL | 6010C | 0 - 0.5 |
| Moisture Content | Moisture | MOIST | 63 / 63 | 0.51 | 19.3 | 0.1 - 0.1 | 0.1 - 0.1 | % | NBZ_DG-562 | LL | 160.3M | 0 - 0.5 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 13 / 32 | 0.71 J Z | 62 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5C_DG-511 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 16 / 32 | 0.69 J Z | 69 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5C_DG-511 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Acenaphthene | 83-32-9 | 2 / 32 | 0.98 J Z | 3 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5C_DG-511 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Acenaphthylene | 208-96-8 | 5 / 32 | 0.35 J Z | 29 | 0.33 - 3.5 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Anthracene | 120-12-7 | 11 / 32 | 0.35 J Z | 29 | 0.33 - 3.5 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 16 / 32 | 0.75 J Z<br>0.75 J Z | 430 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 16 / 32 | 0.69 J Z | 680 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 23 / 32 | 0.88 J Z | 2600 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 8 / 32 | 3.8 J Z | 1100 | 3.3 - 170 | 17 - 860 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 11 / 32 | 0.75 J Z | 590 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 23 / 32 | 1.3 J Z | 250 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 21 / 32 | 6.4 J Z | 59 | 6 - 63 | 18 - 190 | µg/kg | NBZ_DG-559 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 9 / 32 | 6.8 J Z | 120 | 6 - 63 | 18 - 190 | µg/kg | NBZ_DG-565 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Chrysene | 218-01-9 | 26 / 32 | 0.66 J Z | 2000 | 0.33 - 17 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 6 / 32 | 0.99 J Z | 190 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Diethylphthalate | 84-66-2 | 0 / 32 | - | - | 6 - 63 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 32 | - | - | 6 - 63 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 1 / 32 | 7.1 J FD, Z | 7.1 J FD, Z | 6 - 63 | 18 - 190 | µg/kg | 5D_DG-585 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Di-n-octylphthalate | 117-84-0 | 2 / 32 | 9.3 J FD, Z, C | 10 J Z | 6 - 63 | 18 - 190 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Fluoranthene | 206-44-0 | 26 / 32 | 0.78 J Z | 330 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Fluorene | 86-73-7 | 10 / 32 | 0.81 J Z | 8.7 | 0.67 - 7 | 1.7 - 18 | µg/kg | NBZ_DG-562 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 9 / 32 | 0.67 J Z | 770 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Naphthalene | 91-20-3 | 16 / 32 | 0.75 J Z | 70 | 0.67 - 7 | 1.7 - 18 | µg/kg | NBZ_DG-568 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 0 / 32 | - | - | 0.67 - 7 | 1.7 - 18 | µg/kg | - | - | - | - |
| PAHs | Phenanthrene | 85-01-8 | 24 / 32 | 0.68 J Z | 160 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Pyrene | 129-00-0 | 23 / 32 | 0.7 J Z | 280 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 39 | - | - | 3.3 - 8.2 | 17 - 21 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 39 | - | - | 5.1 - 6.3 | 17 - 21 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 39 | - | - | 4.1 - 10 | 17 - 21 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 39 | - | - | 4.1 - 10 | 17 - 21 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 3 / 39 | 6.7 J S, Z | 61 | 3.3 - 4.1 | 17 - 21 | µg/kg | 5B_DG-839 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 14 / 39 | 7.5 J Z | 110 | 4.4 - 5.4 | 17 - 21 | µg/kg | 5D_DG-584 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 2 / 39 | 11 J Z | 130 | 3.9 - 4.8 | 17 - 21 | µg/kg | 5B_DG-841 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 39 | - | - | 3.3 - 37 | 17 - 190 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 39 | - | - | 3.3 - 37 | 17 - 190 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 39 | - | - | 9.9 - 12 | 33 - 41 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 39 | - | - | 9.9 - 110 | 33 - 370 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 4 / 39 | 19 J Z | 30 J Z | 9.9 - 12 | 33 - 41 | µg/kg | 5B_DG-798 | LL | 8082A | 0 - 0.5 |
| Perchlorate | Perchlorate | 14797-73-0 | 0 / 4 | - | - | 2.1 - 2.3 | 5.1 - 5.4 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDD | 72-54-8 | 0 / 6 | - | - | 0.33 - 0.95 | 1.7 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDE | 72-55-9 | 5 / 6 | 0.44 J Z | 6.5 | 0.33 - 0.41 | 1.7 - 2.1 | µg/kg | 5D_DG-584 | LL | 8081B | 0 - 0.5 |
| Pesticides | 4,4'-DDT | 50-29-3 | 3 / 6 | 0.39 J Z | 7.8 J Q | 0.35 - 12 | 1.7 - 12 | µg/kg | 5D_DG-585 | LL | 8081B | 0 - 0.5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 6 | - | - | 0.17 - 0.21 | 0.83 - 1 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 6 | - | - | 0.17 - 0.22 | 0.83 - 1 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 1 / 6 | 1.3 J Z | 1.3 J Z | 0.97 - 1.2 | 1.9 - 2.4 | µg/kg | NBZ_DG-563 | LL | 8081B | 0 - 0.5 |
| Pesticides | Chlordane | 57-74-9 | 0 / 6 | - | - | 4 - 19 | 17 - 21 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 0 / 6 | - | - | 0.45 - 0.56 | 0.83 - 1 | µg/kg | - | - | - | - |
| Pesticides | Dieldrin | 60-57-1 | 0 / 6 | - | - | 0.33 - 2.8 | 1.7 - 2.8 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan I | 959-98-8 | 0 / 6 | - | - | 0.22 - 0.27 | 0.83 - 1 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan II | 33213-65-9 | 0 / 6 | - | - | 0.33 - 0.54 | 1.7 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 0 / 6 | - | - | 0.33 - 0.41 | 1.7 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | Endrin | 72-20-8 | 0 / 6 | - | - | 0.34 - 0.83 | 1.7 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 1 / 6 | 0.79 J Z | 0.79 J Z | 0.33 - 0.95 | 1.7 - 2.1 | µg/kg | NBZ_DG-558 | LL | 8081B | 0 - 0.5 |

**Table 3-1**
**Summary of Analytical Results for Chemicals - Validated Data**
**Surface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pesticides | Endrin Ketone | 53494-70-5 | 0 / 6 | - | - | 0.6 - 0.74 | 1.8 - 2.2 | µg/kg | - | - | - | - |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 2 / 6 | 0.21 J Z | 0.34 J Z | 0.17 - 0.21 | 0.83 - 1 | µg/kg | NBZ_DG-562 | LL | 8081B | 0 - 0.5 |
| Pesticides | Heptachlor | 76-44-8 | 0 / 6 | - | - | 0.17 - 0.21 | 0.83 - 1 | µg/kg | - | - | - | - |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 1 / 6 | 0.24 J Z | 0.24 J Z | 0.17 - 0.53 | 0.83 - 1 | µg/kg | NBZ_DG-562 | LL | 8081B | 0 - 0.5 |
| Pesticides | Methoxychlor | 72-43-5 | 0 / 6 | - | - | 1.7 - 2.1 | 6.7 - 8.3 | µg/kg | - | - | - | - |
| Pesticides | Mirex | 2385-85-5 | 0 / 6 | - | - | 0.35 - 0.43 | 1.7 - 2.1 | µg/kg | - | - | - | - |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 6 | - | - | 14 - 17 | 33 - 41 | µg/kg | - | - | - | - |
| pH | pH | pH | 33 / 33 | 5.9 | 8.74 | 0.01 - 0.01 | 0.01 - 0.01 | pH | 5C_DG-757 | LL | 9045M | 0 - 0.5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 1 / 59 | 2.4 J Z | 2.4 J Z | 2 - 11 | 5 - 26 | mg/kg | NBZ_DG-565 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 35 / 59 | 2.1 J Z<br>2.1 J Z | 27 | 2 - 11 | 5 - 26 | mg/kg | NBZ_DG-568 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 54 / 59 | 4.4 J Z | 210 | 2 - 11 | 5 - 26 | mg/kg | NBZ_DG-566 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 54 / 59 | 9.8 J Z | 400 | 4 - 21 | 10 - 53 | mg/kg | NBZ_DG-566 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 4 / 59 | 2.1 J Z | 13 J Z | 2 - 11 | 5 - 26 | mg/kg | 5D_DG-612 | LL | 8015M | 0 - 0.5 |
| TPH-EFH-SilicaGel | EFH (C12-C14) w/ Silica Gel | PHCC12C14SILICA | 0 / 55 | - | - | 2 - 2.5 | 5 - 6.2 | mg/kg | - | - | - | - |
| TPH-EFH-SilicaGel | EFH (C15-C20) w/ Silica Gel | PHCC15C20SILICA | 1 / 55 | 5.5 J L | 5.5 J L | 2 - 2.5 | 5 - 6.2 | mg/kg | NBZ_DG-566 | LL | 8015M | 0 - 0.5 |
| TPH-EFH-SilicaGel | EFH (C21-C30) w/ Silica Gel | PHCC21C30SILICA | 35 / 55 | 2.1 J L, Z | 61 J L | 2 - 2.5 | 5 - 6.2 | mg/kg | NBZ_DG-566 | LL | 8015M | 0 - 0.5 |
| TPH-EFH-SilicaGel | EFH (C30-C40) w/ Silica Gel | PHCC30C40SILICA | 26 / 55 | 4.2 J Z | 100 | 4 - 5 | 9.9 - 12 | mg/kg | NBZ_DG-566 | LL | 8015M | 0 - 0.5 |
| TPH-EFH-SilicaGel | EFH (C8-C11) w/ Silica Gel | PHCC8C11SILICA | 0 / 55 | - | - | 2 - 2.5 | 5 - 6.2 | mg/kg | - | - | - | - |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
HpCDF = heptachlorodibenzofuran
HxCDF = hexachlorodibenzofuran
PeCDF = pentachlorodibenzofuran
TCDD = tetrachlorodibenzodioxin
OCDD = octachlorodibenzodioxin
OCDF = octachlorodibenzofuran
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
2,4,5-T = 2,4,5-trichlorophenoxyacetic acid
2,4-D = 2-4-dichlorophenoxyacetic acid
2,4-DB = 2,4-dichlorophenoxy butyric acid
MCPA = 2-methyl-4-chlorophenoxyacetic acid
MCPP = methylchlorophenoxypropionic acid
PAH = polyaromatic hydrocarbon
PCB/PCT = polychlorinated biphenyls/polychlorinated
SVOC = semivolatile organic compound
VOC = volatile organic compound
Specific concentration qualifiers are defined in Appendix A

**Table 3-2**
**Summary of Analytical Results for Chemicals - Validated Data**
**Subsurface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 1,4-Dioxane | 123-91-1 | 0 / 1 | - | - | 5.5 - 5.5 | 16 - 16 | µg/kg | - | - | - | - |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 54 / 79 | 0.393 J Z | 1210 | 0.0076 - 0.228 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 36 / 79 | 0.244 J Z | 137 | 0.00241 - 0.0789 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 10 / 79 | 0.0495 J Z | 11.7 | 0.00434 - 0.14 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 26 / 79 | 0.0213 J Z | 10.7 | 0.00863 - 0.138 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 18 / 79 | 0.0237 J Z | 3.42 J Z | 0.00533 - 0.155 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 42 / 79 | 0.0248 J Z | 54.7 | 0.00865 - 0.138 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 24 / 79 | 0.0175 J Z | 4.44 J Z | 0.00459 - 0.134 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 46 / 79 | 0.0395 J Z | 21.9 | 0.00889 - 0.141 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 20 / 79 | 0.0302 J Z | 0.982 J Z | 0.00576 - 0.178 | 4.87 - 5.77 | ng/kg | 5B_DG-699 | LL | 1613B | 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 21 / 79 | 0.0356 J Z | 14.8 | 0.00319 - 0.0803 | 4.87 - 5.77 | ng/kg | 8_DG-611 | LL | 1613B | 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 26 / 79 | 0.0232 J FD, Z | 4.52 J Z | 0.00653 - 0.236 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 19 / 79 | 0.0215 J Z | 9.77 | 0.00489 - 0.148 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 11 / 79 | 0.0787 J Z | 1.5 J Z | 0.00338 - 0.0865 | 4.87 - 5.77 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 15 / 79 | 0.0572 J Z | 1.99 | 0.00729 - 0.149 | 0.974 - 1.15 | ng/kg | 5A_DG-730 | LL | 1613B | 0.5 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 29 / 79 | 0.0245 J Z | 1.49 | 0.00531 - 0.147 | 0.974 - 1.15 | ng/kg | 6_DG-686 | LL | 1613B | 0.5 |
| Dioxins | OCDD | 3268-87-9 | 68 / 79 | 1.62 J Z | 10200 J *# | 0.00694 - 0.169 | 9.74 - 11.5 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Dioxins | OCDF | 39001-02-0 | 37 / 79 | 0.44 J Z | 257 | 0.0061 - 0.128 | 9.74 - 11.5 | ng/kg | 5C_DG-511 | LL | 1613B | 2 - 3 |
| Energetics | 1,3,5-Trinitrobenzene | 99-35-4 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2,4,6-Trinitrotoluene | 118-96-7 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 0 / 12 | - | - | 200 - 210 | 410 - 430 | µg/kg | - | - | - | - |
| Energetics | 2,4-Dinitrotoluene | 121-14-2 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 0 / 12 | - | - | 200 - 210 | 410 - 430 | µg/kg | - | - | - | - |
| Energetics | 2,6-Dinitrotoluene | 606-20-2 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2-Nitrotoluene | 88-72-2 | 0 / 12 | - | - | 200 - 210 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 3-Nitrotoluene | 99-08-1 | 0 / 12 | - | - | 260 - 270 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 0 / 12 | - | - | 150 - 160 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 4-Nitrotoluene | 99-99-0 | 0 / 12 | - | - | 200 - 210 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | HMX | 2691-41-0 | 0 / 12 | - | - | 200 - 210 | 410 - 430 | µg/kg | - | - | - | - |
| Energetics | M-Dinitrobenzene | 99-65-0 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | Nitrobenzene | 98-95-3 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | Nitroglycerin | 55-63-0 | 0 / 12 | - | - | 1000 - 3800 | 2000 - 3800 | µg/kg | - | - | - | - |
| Energetics | PETN | 78-11-5 | 0 / 12 | - | - | 1000 - 1100 | 2000 - 2100 | µg/kg | - | - | - | - |
| Energetics | RDX | 121-82-4 | 0 / 12 | - | - | 130 - 140 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | Tetryl | 479-45-8 | 0 / 12 | - | - | 160 - 170 | 310 - 320 | µg/kg | - | - | - | - |
| Formaldehyde | Formaldehyde | 50-00-0 | 0 / 3 | - | - | 1300 - 1400 | 2100 - 2300 | µg/kg | - | - | - | - |
| Glycols | Diethylene Glycol | 111-46-6 | 0 / 12 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Glycols | Ethylene Glycol | 107-21-1 | 0 / 12 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Glycols | Propylene Glycol | 57-55-6 | 0 / 12 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Glycols | Triethylene Glycol | 112-27-6 | 0 / 11 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 0 / 11 | - | - | 45 - 47 | 92 - 96 | µg/kg | - | - | - | - |
| Herbicides | 2,4,5-T | 93-76-5 | 0 / 12 | - | - | 0.84 - 0.87 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Herbicides | 2,4-D | 94-75-7 | 0 / 12 | - | - | 12 - 13 | 37 - 38 | µg/kg | - | - | - | - |
| Herbicides | 2,4-DB | 94-82-6 | 4 / 12 | 15 J Z<br>15 J Z | 19<br>19 | 6.3 - 16 | 17 - 18 | µg/kg | 5C_DG-655<br>5C_DG-653 | LL<br>LL | 8151A<br>8151A | 0.5<br>0.5 |
| Herbicides | Dicamba | 1918-00-9 | 0 / 12 | - | - | 4.1 - 4.3 | 12 - 13 | µg/kg | - | - | - | - |
| Herbicides | Dichlorprop | 120-36-5 | 0 / 12 | - | - | 9.2 - 9.6 | 17 - 18 | µg/kg | - | - | - | - |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 0 / 4 | - | - | 9.4 - 9.4 | 25 - 25 | µg/kg | - | - | - | - |
| Herbicides | MCPA | 94-74-6 | 0 / 12 | - | - | 780 - 810 | 2600 - 2700 | µg/kg | - | - | - | - |
| Herbicides | MCPP | 93-65-2 | 0 / 12 | - | - | 770 - 800 | 2600 - 2700 | µg/kg | - | - | - | - |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 0 / 12 | - | - | 0.77 - 0.8 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Hexavalent Chromium | Chromium (Hexavalent Compounds) | 18540-29-9 | 6 / 12 | 0.29 J Z | 0.62 | 0.14 - 0.15 | 0.41 - 0.44 | mg/kg | 5C_DG-651 | LL | 7199 | 0.5 |
| Mercury | Mercury | 7439-97-6 | 51 / 90 | 0.0103 J Z | 0.313 | 0.0096 - 0.0116 | 0.016 - 0.0193 | mg/kg | 5A_DG-730 | LL | 7471B | 6 |
| Metals | Aluminum | 7429-90-5 | 90 / 90 | 8420 | 31500 | 7.02 - 8.65 | 39 - 48 | mg/kg | 5B_DG-836 | LL | 6010C | 15 - 16 |
| Metals | Antimony | 7440-36-0 | 0 / 90 | - | - | 0.721 - 0.887 | 3.9 - 4.8 | mg/kg | - | - | - | - |
| Metals | Arsenic | 7440-38-2 | 87 / 90 | 1.24 J Z | 35.4 | 0.682 - 0.839 | 3.9 - 4.8 | mg/kg | 5B_DG-842 | LL | 6010C | 4 - 5 |

**Table 3-2**
**Summary of Analytical Results for Chemicals - Validated Data**
**Subsurface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals | Barium | 7440-39-3 | 90 / 90 | 55.5 J Q | 247 J FD, E, Q | 0.0321 - 0.0396 | 0.974 - 1.2 | mg/kg | 5A_DG-874 | LL | 6010C | 4 - 5 |
| Metals | Beryllium | 7440-41-7 | 90 / 90 | 0.313 J Z | 2.19 | 0.0652 - 0.0803 | 0.974 - 1.2 | mg/kg | NBZ_DG-581 | LL | 6010C | 9 - 10 |
| Metals | Boron | 7440-42-8 | 58 / 90 | 0.927 J Z | 18 | 0.818 - 4.46 | 9.74 - 53.1 | mg/kg | 8_DG-611 | LL | 6010C | 0.5 |
| Metals | Cadmium | 7440-43-9 | 35 / 90 | 0.103 J Z | 0.817 J Z | 0.074 - 0.0911 | 0.974 - 1.2 | mg/kg | 6_DG-686 | LL | 6010C | 0.5 |
| Metals | Calcium | 7440-70-2 | 90 / 90 | 1850 | 53400 J E | 3.25 - 4 | 19.5 - 24 | mg/kg | 8_DG-611 | LL | 6010C | 0.5 |
| Metals | Chromium | 7440-47-3 | 90 / 90 | 9.38 | 42.3 J Q | 0.156 - 0.192 | 2.92 - 3.6 | mg/kg | 5D_DG-585 | LL | 6010C | 4 - 5 |
| Metals | Cobalt | 7440-48-4 | 90 / 90 | 3.32 | 12.9<br>12.9 | 0.0964 - 0.119 | 0.974 - 1.2 | mg/kg | NBZ_DG-581<br>NBZ_DG-581 | LL<br>LL | 6010C<br>6010C | 13 - 14<br>4 - 5 |
| Metals | Copper | 7440-50-8 | 90 / 90 | 4.23 | 34.6 | 0.282 - 0.348 | 1.95 - 2.4 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Iron | 7439-89-6 | 90 / 90 | 12400 | 60400 | 3.53 - 20.3 | 39 - 224 | mg/kg | NBZ_DG-581 | LL | 6010C | 9 - 10 |
| Metals | Lead | 7439-92-1 | 90 / 90 | 2.56 J E, Z | 24.4 | 0.487 - 0.6 | 2.92 - 3.6 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Lithium | 7439-93-2 | 90 / 90 | 11.3 | 69.2 | 0.33 - 0.41 | 3.9 - 4.8 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Magnesium | 7439-95-4 | 90 / 90 | 3240 | 11900 | 1.63 - 2 | 9.74 - 12 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Manganese | 7439-96-5 | 90 / 90 | 167 | 681 | 0.0808 - 0.0995 | 0.974 - 1.2 | mg/kg | 5C_DG-757 | LL | 6010C | 8 - 9 |
| Metals | Molybdenum | 7439-98-7 | 40 / 90 | 0.174 J Z | 0.877 J Z | 0.166 - 0.204 | 1.95 - 2.4 | mg/kg | 5B_DG-842 | LL | 6010C | 4 - 5 |
| Metals | Nickel | 7440-02-0 | 90 / 90 | 5.42 | 32.9 J A | 0.127 - 0.156 | 1.95 - 2.4 | mg/kg | 5D_DG-585 | LL | 6010C | 4 - 5 |
| Metals | Phosphorus | 7723-14-0 | 90 / 90 | 126 | 776 | 2.81 - 3.47 | 9.74 - 12 | mg/kg | NBZ_DG-581 | LL | 6010C | 13 - 14 |
| Metals | Potassium | 7440-09-7 | 90 / 90 | 1290 J Q | 6150 J Q | 8.12 - 10 | 97.4 - 120 | mg/kg | 8_DG-611 | LL | 6010C | 0.5 |
| Metals | Selenium | 7782-49-2 | 67 / 90 | 0.117 J Z | 0.98 | 0.0974 - 0.12 | 0.39 - 0.48 | mg/kg | NBZ_DG-581 | LL | 6020A | 9 - 10 |
| Metals | Silver | 7440-22-4 | 71 / 90 | 0.0271 J Z | 2.47 | 0.0253 - 0.0312 | 0.195 - 0.24 | mg/kg | 5A_DG-730 | LL | 6020A | 0.5 |
| Metals | Sodium | 7440-23-5 | 90 / 90 | 64.9 J Z | 1890 | 16.3 - 20 | 97.4 - 120 | mg/kg | 5B_DG-843 | LL | 6010C | 4 - 5 |
| Metals | Strontium | 7440-24-6 | 90 / 90 | 9.45 | 108 | 0.0662 - 0.179 | 0.39 - 1.05 | mg/kg | 8_DG-611 | LL | 6020A | 0.5 |
| Metals | Thallium | 7440-28-0 | 90 / 90 | 0.126 J Z | 0.524 | 0.0292 - 0.036 | 0.195 - 0.24 | mg/kg | NBZ_DG-581 | LL | 6020A | 9 - 10 |
| Metals | Tin | 7440-31-5 | 0 / 90 | - | - | 0.214 - 0.264 | 9.74 - 12 | mg/kg | - | - | - | - |
| Metals | Titanium | 7440-32-6 | 90 / 90 | 535 | 2170 | 0.166 - 0.903 | 0.974 - 5.31 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Vanadium | 7440-62-2 | 90 / 90 | 20.9 | 78.8 | 0.127 - 0.156 | 0.974 - 1.2 | mg/kg | NBZ_DG-581 | LL | 6010C | 9 - 10 |
| Metals | Zinc | 7440-66-6 | 90 / 90 | 39.6 | 210 J E | 0.195 - 0.24 | 3.9 - 4.8 | mg/kg | 5A_DG-587 | LL | 6010C | 0.5 |
| Metals | Zirconium | 7440-67-7 | 28 / 90 | 1.04 J Z | 9.28 | 0.818 - 1.01 | 4.87 - 6 | mg/kg | NBZ_DG-581 | LL | 6010C | 13 - 14 |
| Moisture Content | Moisture | MOIST | 167 / 167 | 1.2 | 17.5 | 0.1 - 0.1 | 0.1 - 0.1 | % | 8SV_DG-517 | LL | 160.3M | 10 - 11 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 14 / 91 | 0.83 J Z | 280 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 20 / 91 | 0.71 J Z | 250 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | Acenaphthene | 83-32-9 | 5 / 91 | 1.2 J Z | 29 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Acenaphthylene | 208-96-8 | 5 / 91 | 0.35 J Z | 8.8 | 0.34 - 0.4 | 1.7 - 2 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | Anthracene | 120-12-7 | 20 / 91 | 0.49 J FD, Z | 130 | 0.34 - 0.4 | 1.7 - 2 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 26 / 91 | 0.71 J Z | 110 | 0.67 - 3 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 27 / 91 | 0.72 J Z | 48 | 0.67 - 4 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 36 / 91 | 0.72 J Z | 83 | 0.67 - 4 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 9 / 91 | 4.1 J L, Z | 31 | 3.4 - 4 | 17 - 20 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 22 / 91 | 0.74 J Z | 11 | 0.67 - 3 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 20 / 91 | 0.75 J Z | 43 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 24 / 91 | 8.2 J Z<br>8.2 J Z | 87 | 6.1 - 7.2 | 18 - 22 | µg/kg | 5C_DG-748 | LL | 8270D SIM | 4 - 5 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 2 / 91 | 6.4 J Z | 7.3 J Z | 6.1 - 7.2 | 18 - 22 | µg/kg | 5B_DG-529 | LL | 8270D SIM | 0.5 |
| PAHs | Chrysene | 218-01-9 | 45 / 91 | 0.38 J Z | 100 | 0.34 - 3 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 10 / 91 | 0.75 J Z | 4.3 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Diethylphthalate | 84-66-2 | 1 / 91 | 7.2 J Z | 7.2 J Z | 6.1 - 7.2 | 18 - 22 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 91 | - | - | 6.1 - 7.2 | 18 - 22 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 2 / 91 | 6.2 J Z | 7.6 J Z | 6.1 - 7.2 | 18 - 22 | µg/kg | 6_DG-686 | LL | 8270D SIM | 0.5 |
| PAHs | Di-n-octylphthalate | 117-84-0 | 2 / 91 | 7.9 J Z | 8.1 J Z | 6.1 - 7.2 | 18 - 22 | µg/kg | 5A_DG-877 | LL | 8270D SIM | 3 - 4 |
| PAHs | Fluoranthene | 206-44-0 | 38 / 91 | 0.7 J Z | 470 | 0.67 - 7.7 | 1.7 - 19 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Fluorene | 86-73-7 | 8 / 91 | 0.79 J Z | 19 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 / 91 | 0.74 J Z | 12 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Morpholine | 110-91-8 | 0 / 8 | - | - | 20 - 22 | 20 - 22 | µg/kg | - | - | - | - |
| PAHs | Naphthalene | 91-20-3 | 24 / 91 | 0.69 J Z | 76 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 1 / 91 | 4.6 | 4.6 | 0.67 - 0.8 | 1.7 - 2 | µg/kg | 5C_DG-503 | LL | 8270D SIM | 5 |
| PAHs | Phenanthrene | 85-01-8 | 37 / 91 | 0.7 J FD, Z | 700 | 0.67 - 7.7 | 1.7 - 19 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | Pyrene | 129-00-0 | 40 / 91 | 0.71 J Z | 550 | 0.67 - 7.7 | 1.7 - 19 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 91 | - | - | 3.3 - 4 | 17 - 20 | µg/kg | - | - | - | - |

**Table 3-2**
**Summary of Analytical Results for Chemicals - Validated Data**
**Subsurface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 91 | - | - | 5.1 - 6.1 | 17 - 20 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 91 | - | - | 4.1 - 4.9 | 17 - 20 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 91 | - | - | 4.1 - 4.9 | 17 - 20 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 4 / 91 | 7.8 J FD, Z | 31 | 3.3 - 4 | 17 - 20 | µg/kg | 5B_DG-839 | LL | 8082A | 9 - 10 |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 12 / 91 | 6.5 J Z | 99 | 4.4 - 5.3 | 17 - 20 | µg/kg | 8_DG-611 | LL | 8082A | 0.5 |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 6 / 91 | 6.9 J Z | 31 | 3.9 - 4.7 | 17 - 20 | µg/kg | 5C_DG-605 | LL | 8082A | 0.5 |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 91 | - | - | 3.3 - 4 | 17 - 20 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 91 | - | - | 3.3 - 4 | 17 - 20 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 91 | - | - | 10 - 12 | 33 - 40 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 91 | - | - | 10 - 12 | 33 - 40 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 1 / 91 | 41 | 41 | 10 - 12 | 33 - 40 | µg/kg | 5A_DG-730 | LL | 8082A | 0.5 |
| Perchlorate | Perchlorate | 14797-73-0 | 0 / 23 | - | - | 2.1 - 2.3 | 5.1 - 5.6 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDD | 72-54-8 | 1 / 24 | 1.4 J Z | 1.4 J Z | 0.33 - 39 | 1.7 - 39 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | 4,4'-DDE | 72-55-9 | 4 / 24 | 1.1 J Z, C | 550 | 0.34 - 17 | 1.7 - 86 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | 4,4'-DDT | 50-29-3 | 7 / 24 | 0.4 J Z | 45 J Z | 0.36 - 18 | 1.7 - 86 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 24 | - | - | 0.17 - 0.88 | 0.84 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 24 | - | - | 0.17 - 0.88 | 0.84 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 1 / 24 | 1.4 J Z | 1.4 J Z | 0.97 - 4.9 | 1.9 - 9.8 | µg/kg | 5C_DG-655 | LL | 8081B | 0.5 |
| Pesticides | Chlordane | 57-74-9 | 0 / 24 | - | - | 4 - 21 | 17 - 88 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 0 / 24 | - | - | 0.46 - 2.3 | 0.84 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Dieldrin | 60-57-1 | 1 / 24 | 7 | 7 | 0.33 - 1.9 | 1.7 - 8.8 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Endosulfan I | 959-98-8 | 2 / 24 | 0.39 J Z | 2.7 J Z | 0.22 - 1.1 | 0.84 - 4.3 | µg/kg | 5B_DG-699 | LL | 8081B | 0.5 |
| Pesticides | Endosulfan II | 33213-65-9 | 1 / 24 | 0.56 J Z | 0.56 J Z | 0.33 - 1.7 | 1.7 - 8.8 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 2 / 24 | 1.1 J Z | 4.6 J Z | 0.33 - 1.7 | 1.7 - 8.8 | µg/kg | 5B_DG-699 | LL | 8081B | 0.5 |
| Pesticides | Endrin | 72-20-8 | 0 / 24 | - | - | 0.33 - 3 | 1.7 - 8.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 0 / 24 | - | - | 0.33 - 1.7 | 1.7 - 8.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Ketone | 53494-70-5 | 1 / 24 | 0.92 J Z | 0.92 J Z | 0.61 - 3.1 | 1.8 - 9.3 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 0 / 24 | - | - | 0.17 - 0.88 | 0.84 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Heptachlor | 76-44-8 | 2 / 24 | 0.54 J Z | 1.2 J Z | 0.17 - 0.88 | 0.84 - 4.3 | µg/kg | 5B_DG-699 | LL | 8081B | 0.5 |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 0 / 24 | - | - | 0.17 - 0.88 | 0.84 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Methoxychlor | 72-43-5 | 1 / 24 | 3.4 J Z | 3.4 J Z | 1.7 - 8.8 | 6.8 - 35 | µg/kg | 5B_DG-699 | LL | 8081B | 3 |
| Pesticides | Mirex | 2385-85-5 | 0 / 24 | - | - | 0.35 - 1.8 | 1.7 - 8.8 | µg/kg | - | - | - | - |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 24 | - | - | 14 - 190 | 33 - 190 | µg/kg | - | - | - | - |
| pH | pH | pH | 90 / 90 | 4.52 | 11.9 | 0.01 - 0.01 | 0.01 - 0.01 | pH | 5B_DG-839 | LL | 9045M | 15.5 - 16.5 |
| SVOC | 1,1'-Biphenyl | 92-52-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,2,4-Trichlorobenzene | 120-82-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,2-Dichlorobenzene | 95-50-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,2-Diphenylhydrazine | 122-66-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,3-Dichlorobenzene | 541-73-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,4-Dichlorobenzene | 106-46-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4,5-Trichlorophenol | 95-95-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4,6-Trichlorophenol | 88-06-2 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4-Dichlorophenol | 120-83-2 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4-Dimethylphenol | 105-67-9 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4-Dinitrophenol | 51-28-5 | 0 / 12 | - | - | 310 - 320 | 670 - 1100 | µg/kg | - | - | - | - |
| SVOC | 2,6-Dichlorophenol | 87-65-0 | 0 / 11 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-butoxyethanol | 111-76-2 | 0 / 4 | - | - | 170 - 180 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 2-Chloronaphthalene | 91-58-7 | 0 / 12 | - | - | 7 - 7 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Chlorophenol | 95-57-8 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Methylphenol | 95-48-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Nitroaniline | 88-74-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Nitrophenol | 88-75-5 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-phenoxyethanol | 122-99-6 | 0 / 4 | - | - | 170 - 180 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 3,3'-Dichlorobenzidine | 91-94-1 | 0 / 12 | - | - | 100 - 110 | 340 - 350 | µg/kg | - | - | - | - |
| SVOC | 3,5-Dimethylphenol | 108-68-9 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 3-Nitroaniline | 99-09-2 | 0 / 12 | - | - | 68 - 71 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 4,6-Dinitro-2-methylphenol | 534-52-1 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | 4-Bromophenyl-phenylether | 101-55-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Chloro-3-methylphenol | 59-50-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |

**Table 3-2**
**Summary of Analytical Results for Chemicals - Validated Data**
**Subsurface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVOC | 4-Chloroaniline | 106-47-8 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Chlorophenyl-phenylether | 7005-72-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Methylphenol | 106-44-5 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Nitroaniline | 100-01-6 | 0 / 12 | - | - | 68 - 71 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 4-Nitrophenol | 100-02-7 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | Aniline | 62-53-3 | 0 / 12 | - | - | 170 - 180 | 340 - 530 | µg/kg | - | - | - | - |
| SVOC | Benzidine | 92-87-5 | 0 / 12 | - | - | 710 - 740 | 1700 - 3500 | µg/kg | - | - | - | - |
| SVOC | Benzo(a)anthracene | 56-55-3 | 2 / 2 | 4 J Z<br>4 J Z | 4 J Z<br>4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651<br>5C_DG-651 | LL<br>LL | 8270D<br>8270D | 0.5<br>5 |
| SVOC | Benzo(a)pyrene | 50-32-8 | 5 / 5 | 4 J Z<br>4 J Z<br>4 J Z<br>4 J Z<br>4 J Z | 4 J Z<br>4 J Z<br>4 J Z<br>4 J Z<br>4 J Z | 3 - 4 | 17 - 18 | µg/kg | 5C_DG-651<br>5C_DG-651<br>5C_DG-651<br>5C_DG-651<br>5C_DG-653 | LL<br>LL<br>LL<br>LL<br>LL | 8270D<br>8270D<br>8270D<br>8270D<br>8270D | 0.5<br>10<br>15<br>5<br>0.5 |
| SVOC | Benzo(b)fluoranthene | 205-99-2 | 5 / 5 | 4 J Z | 5 J Z<br>5 J Z<br>5 J Z<br>5 J Z | 3 - 4 | 17 - 18 | µg/kg | 5C_DG-651<br>5C_DG-651<br>5C_DG-651<br>5C_DG-653 | LL<br>LL<br>LL<br>LL | 8270D<br>8270D<br>8270D<br>8270D | 0.5<br>10<br>5<br>0.5 |
| SVOC | Benzo(g,h,i)perylene | 191-24-2 | 1 / 1 | 4 J Z | 4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 0.5 |
| SVOC | Benzoic Acid | 65-85-0 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | Benzyl Alcohol | 100-51-6 | 0 / 12 | - | - | 170 - 180 | 340 - 530 | µg/kg | - | - | - | - |
| SVOC | bis(2-chloroethoxy)methane | 111-91-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | bis(2-chloroethyl) ether | 111-44-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | bis(2-chloroisopropyl) ether | 39638-32-9 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Carbazole | 86-74-8 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Chrysene | 218-01-9 | 1 / 1 | 5 J Z | 5 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 0.5 |
| SVOC | Dibenzofuran | 132-64-9 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Diphenylamine | NDPA122-39-4 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Fluoranthene | 206-44-0 | 2 / 2 | 4 J Z<br>4 J Z | 4 J Z<br>4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651<br>5C_DG-651 | LL<br>LL | 8270D<br>8270D | 0.5<br>5 |
| SVOC | Hexachlorobenzene | 118-74-1 | 0 / 12 | - | - | 3 - 4 | 17 - 18 | µg/kg | - | - | - | - |
| SVOC | Hexachlorobutadiene | 87-68-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Hexachlorocyclopentadiene | 77-47-4 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | Hexachloroethane | 67-72-1 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Isophorone | 78-59-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Nitrobenzene | 98-95-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | N-Nitroso-di-n-propylamine | 621-64-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | N-Nitrosodiphenylamine | 86-30-6 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Pentachlorophenol | 87-86-5 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Phenanthrene | 85-01-8 | 1 / 1 | 4 J Z | 4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 5 |
| SVOC | Phenol | 108-95-2 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Pyrene | 129-00-0 | 2 / 2 | 4 J Z | 5 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 0.5 |
| SVOC | Pyridine | 110-86-1 | 0 / 12 | - | - | 68 - 71 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Tetralin | 119-64-2 | 0 / 4 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| Terphenyls | m-Terphenyl | 92-06-8 | 1 / 12 | 0.51 J Q | 0.51 J Q | 0.068 - 0.071 | 0.17 - 0.18 | mg/kg | 5C_DG-655 | LL | 8015B | 0.5 |
| Terphenyls | o-Terphenyl | 84-15-1 | 0 / 12 | - | - | 0.068 - 0.071 | 0.17 - 0.18 | mg/kg | - | - | - | - |
| Terphenyls | p-Terphenyl | 92-94-4 | 1 / 12 | 0.98 J Q | 0.98 J Q | 0.068 - 0.071 | 0.17 - 0.18 | mg/kg | 5C_DG-655 | LL | 8015B | 0.5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 2 / 95 | 6.8 | 7.6 | 2 - 11 | 5.1 - 26 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 11 / 95 | 2.3 J Z | 36 | 2 - 11 | 5.1 - 26 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 54 / 95 | 2.3 J Z | 130 | 2 - 11 | 5.1 - 26 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 50 / 95 | 5 J Z<br>5 J Z | 310 | 4 - 21 | 10 - 53 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 2 / 95 | 4.5 J Z | 7.9 | 2 - 11 | 5.1 - 26 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH-SilicaGel | EFH (C12-C14) w/ Silica Gel | PHCC12C14SILICA | 2 / 87 | 3.3 J L, Z | 4.6 J L, Z | 2 - 4.2 | 5.1 - 11 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH-SilicaGel | EFH (C15-C20) w/ Silica Gel | PHCC15C20SILICA | 4 / 87 | 4.6 J L, Z | 16 J L | 2 - 4.2 | 5.1 - 11 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH-SilicaGel | EFH (C21-C30) w/ Silica Gel | PHCC21C30SILICA | 20 / 87 | 2.1 J Z<br>2.1 J L, Z | 94 J L | 2 - 4.2 | 5.1 - 11 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |
| TPH-EFH-SilicaGel | EFH (C30-C40) w/ Silica Gel | PHCC30C40SILICA | 17 / 87 | 4.6 J Z | 210 | 4 - 8.4 | 10 - 21 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |

**Table 3-2**
**Summary of Analytical Results for Chemicals - Validated Data**
**Subsurface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-EFH-SilicaGel | EFH (C8-C11) w/ Silica Gel | PHCC8C11SILICA | 1 / 87 | 5.6 J L | 5.6 J L | 2 - 4.2 | 5.1 - 11 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 1 / 76 | 2.2 | 2.2 | 0.2 - 1.9 | 0.9 - 9.4 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |
| VOC | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,1-Trichloroethane | 71-55-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,2-Trichloroethane | 79-00-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1-Dichloroethane | 75-34-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1-Dichloroethene | 75-35-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1-Dichloropropene | 563-58-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,3-Trichlorobenzene | 87-61-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,3-Trichloropropane | 96-18-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,4-Trichlorobenzene | 120-82-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,4-Trimethylbenzene | 95-63-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dibromoethane | 106-93-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dichlorobenzene | 95-50-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dichloroethane | 107-06-2 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dichloropropane | 78-87-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,3,5-Trimethylbenzene | 108-67-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,3-Dichlorobenzene | 541-73-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,3-Dichloropropane | 142-28-9 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,4-Dichlorobenzene | 106-46-7 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1-Chlorohexane | 544-10-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2,2-Dichloropropane | 594-20-7 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2-Butanone (MEK) | 78-93-3 | 1 / 68 | 4 J Z | 4 J Z | 4 - 5 | 9 - 12 | µg/kg | 5CSV_DG-525 | LL | 8260B | 5 - 6 |
| VOC | 2-Chloro-1,1,1-trifluoroethane | 75-88-7 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2-Chloroethyl Vinyl Ether | 110-75-8 | 0 / 68 | - | - | 2 - 2 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | 2-Chlorotoluene | 95-49-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2-Hexanone | 591-78-6 | 0 / 68 | - | - | 3 - 4 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | 2-Phenylbutane | 135-98-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 4-Chlorotoluene | 106-43-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0 / 68 | - | - | 3 - 4 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | Acetone | 67-64-1 | 3 / 68 | 11 J Z | 32 | 6 - 9 | 18 - 25 | µg/kg | 5CSV_DG-525 | LL | 8260B | 5 - 6 |
| VOC | Acrolein | 107-02-8 | 0 / 68 | - | - | 18 - 25 | 89 - 120 | µg/kg | - | - | - | - |
| VOC | Acrylonitrile | 107-13-1 | 0 / 68 | - | - | 4 - 5 | 18 - 25 | µg/kg | - | - | - | - |
| VOC | Benzene | 71-43-2 | 0 / 68 | - | - | 0.4 - 0.6 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromobenzene | 108-86-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromochloromethane | 74-97-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromodichloromethane | 75-27-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromoform | 75-25-2 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromomethane | 74-83-9 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Carbon Disulfide | 75-15-0 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Carbon Tetrachloride | 56-23-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chlorobenzene | 108-90-7 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chloroethane | 75-00-3 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chloroform | 67-66-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chloromethane | 74-87-3 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chlorotrifluoroethylene | 79-38-9 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | cis-1,2-Dichloroethene | 156-59-2 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | cis-1,3-Dichloropropene | 10061-01-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Cymene | 99-87-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Di isopropyl Ether | 108-20-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Dibromochloromethane | 124-48-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Dibromomethane | 74-95-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Dichlorodifluoromethane | 75-71-8 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Ethylbenzene | 100-41-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Hexachloro-1,3-butadiene | 87-68-3 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Isopropylbenzene | 98-82-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |

**Table 3-2**
**Summary of Analytical Results for Chemicals - Validated Data**
**Subsurface Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOC | m,p-Xylene | 179601-23-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Methyl Iodide | 74-88-4 | 0 / 68 | - | - | 3 - 4 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Methyl Tert-Butyl Ether | 1634-04-4 | 0 / 68 | - | - | 0.4 - 0.6 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Methylene Chloride | 75-09-2 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | n-Butylbenzene | 104-51-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | n-Propylbenzene | 103-65-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | o-Xylene | 95-47-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Styrene | 100-42-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | tert-Butyl ethyl ether | 637-92-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | tert-Butylbenzene | 98-06-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Tertiary amyl methyl ether | 994-05-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Tertiary butyl alcohol | 75-65-0 | 0 / 68 | - | - | 18 - 25 | 44 - 62 | µg/kg | - | - | - | - |
| VOC | Tetrachloroethene | 127-18-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Toluene | 108-88-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | trans-1,2-Dichloroethene | 156-60-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | trans-1,3-Dichloropropene | 10061-02-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Trichloroethene | 79-01-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Trichlorofluoromethane | 75-69-4 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Vinyl Acetate | 108-05-4 | 0 / 68 | - | - | 2 - 2 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | Vinyl Chloride | 75-01-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |

**Notes**
LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
HpCDF = heptachlorodibenzofuran
HxCDF = hexachlorodibenzofuran
PeCDF = pentachlorodibenzofuran
TCDD = tetrachlorodibenzodioxin
OCDD = octachlorodibenzodioxin
OCDF = octachlorodibenzofuran
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
2,4,5-T = 2,4,5-trichlorophenoxyacetic acid
2,4-D = 2-4-dichlorophenoxyacetic acid
2,4-DB = 2,4-dichlorophenoxy butyric acid
MCPA = 2-methyl-4-chlorophenoxyacetic acid
MCPP = methylchlorophenoxypropionic acid
PAH = polyaromatic hydrocarbon
PCB/PCT = polychlorinated biphenyls/polychlorinated triphenyls
SVOC = semivolatile organic compound
VOC = volatile organic compound
Specific concentration qualifiers are defined in Appendix A

**Table 3-3**
**Summary of Analytical Results for Chemicals - Validated Data**
**Combined Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 1,4-Dioxane | 123-91-1 | 0 / 1 | - | - | 5.5 - 5.5 | 16 - 16 | µg/kg | - | - | - | - |
| Dioxins | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 35822-46-9 | 71 / 99 | 0.393 J Z | 2670 J *# | 0.0076 - 0.283 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,6,7,8-HPCDF | 67562-39-4 | 53 / 99 | 0.244 J Z | 282 | 0.00241 - 0.11 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8,9-HPCDF | 55673-89-7 | 21 / 99 | 0.05 J Z | 25.5 | 0.00434 - 0.14 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 39227-28-6 | 38 / 99 | 0.021 J Z | 26 | 0.00863 - 0.153 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,4,7,8-HXCDF | 70648-26-9 | 32 / 99 | 0.024 J Z | 6.99 | 0.00533 - 0.155 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 57653-85-7 | 59 / 99 | 0.025 J Z | 126 | 0.00865 - 0.153 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,6,7,8-HXCDF | 57117-44-9 | 36 / 99 | 0.018 J Z | 10.1 | 0.00459 - 0.136 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 19408-74-3 | 64 / 99 | 0.04 J Z | 52.2 | 0.00889 - 0.149 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8,9-HXCDF | 72918-21-9 | 32 / 99 | 0.03 J Z | 1.88 J Z | 0.00576 - 0.178 | 4.87 - 6 | ng/kg | 5D_DG-586 | LL | 1613B | 0 - 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzofuran | 57117-41-6 | 32 / 99 | 0.036 J Z | 14.8 | 0.00319 - 0.0897 | 4.87 - 6 | ng/kg | 8_DG-611 | LL | 1613B | 0.5 |
| Dioxins | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 40321-76-4 | 41 / 99 | 0.023 J FD, Z | 11.8 | 0.00653 - 0.278 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,6,7,8-HXCDF | 60851-34-5 | 29 / 99 | 0.022 J Z | 21.7 | 0.00489 - 0.148 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,4,7,8-PECDF | 57117-31-4 | 21 / 99 | 0.079 J Z | 3.07 J Z | 0.00338 - 0.0865 | 4.87 - 6 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | 2,3,7,8-TCDD | 1746-01-6 | 21 / 99 | 0.057 J Z | 1.99 | 0.00729 - 0.201 | 0.974 - 1.2 | ng/kg | 5A_DG-730 | LL | 1613B | 0.5 |
| Dioxins | 2,3,7,8-Tetrachlorodibenzofuran | 51207-31-9 | 43 / 99 | 0.025 J Z | 1.64 | 0.00531 - 0.152 | 0.974 - 1.2 | ng/kg | 5D_DG-584 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDD | 3268-87-9 | 87 / 99 | 1.62 J Z | 26100 J *# | 0.00694 - 0.171 | 9.74 - 12 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Dioxins | OCDF | 39001-02-0 | 52 / 99 | 0.44 J Z | 584 | 0.0061 - 0.128 | 9.74 - 12 | ng/kg | 5C_DG-511 | LL | 1613B | 0 - 0.5 |
| Energetics | 1,3,5-Trinitrobenzene | 99-35-4 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2,4,6-Trinitrotoluene | 118-96-7 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 0 / 12 | - | - | 200 - 210 | 410 - 430 | µg/kg | - | - | - | - |
| Energetics | 2,4-Dinitrotoluene | 121-14-2 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 0 / 12 | - | - | 200 - 210 | 410 - 430 | µg/kg | - | - | - | - |
| Energetics | 2,6-Dinitrotoluene | 606-20-2 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 2-Nitrotoluene | 88-72-2 | 0 / 12 | - | - | 200 - 210 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 3-Nitrotoluene | 99-08-1 | 0 / 12 | - | - | 260 - 270 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 0 / 12 | - | - | 150 - 160 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | 4-Nitrotoluene | 99-99-0 | 0 / 12 | - | - | 200 - 210 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | HMX | 2691-41-0 | 0 / 12 | - | - | 200 - 210 | 410 - 430 | µg/kg | - | - | - | - |
| Energetics | M-Dinitrobenzene | 99-65-0 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | Nitrobenzene | 98-95-3 | 0 / 12 | - | - | 100 - 110 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | Nitroglycerin | 55-63-0 | 0 / 12 | - | - | 1000 - 3800 | 2000 - 3800 | µg/kg | - | - | - | - |
| Energetics | PETN | 78-11-5 | 0 / 12 | - | - | 1000 - 1100 | 2000 - 2100 | µg/kg | - | - | - | - |
| Energetics | RDX | 121-82-4 | 0 / 12 | - | - | 130 - 140 | 310 - 320 | µg/kg | - | - | - | - |
| Energetics | Tetryl | 479-45-8 | 0 / 12 | - | - | 160 - 170 | 310 - 320 | µg/kg | - | - | - | - |
| Formaldehyde | Formaldehyde | 50-00-0 | 0 / 6 | - | - | 1300 - 13000 | 2100 - 21000 | µg/kg | - | - | - | - |
| Glycols | Diethylene Glycol | 111-46-6 | 0 / 12 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Glycols | Ethylene Glycol | 107-21-1 | 0 / 12 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Glycols | Propylene Glycol | 57-55-6 | 0 / 12 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Glycols | Triethylene Glycol | 112-27-6 | 0 / 11 | - | - | 5.1 - 5.3 | 10 - 11 | mg/kg | - | - | - | - |
| Herbicides | 2,2-Dichlor-Propionic Acid | 75-99-0 | 0 / 13 | - | - | 45 - 47 | 91 - 96 | µg/kg | - | - | - | - |
| Herbicides | 2,4,5-T | 93-76-5 | 0 / 13 | - | - | 0.83 - 0.87 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Herbicides | 2,4-D | 94-75-7 | 0 / 13 | - | - | 12 - 13 | 37 - 38 | µg/kg | - | - | - | - |
| Herbicides | 2,4-DB | 94-82-6 | 5 / 13 | 15 J Z<br>15 J Z | 19 | 6.3 - 16 | 17 - 18 | µg/kg | 5C_DG-653<br>5C_DG-655 | LL<br>LL | 8151A<br>8151A | 0.5<br>0.5 |
| Herbicides | Dicamba | 1918-00-9 | 0 / 14 | - | - | 4.1 - 4.3 | 12 - 13 | µg/kg | - | - | - | - |
| Herbicides | Dichlorprop | 120-36-5 | 0 / 13 | - | - | 9.1 - 9.6 | 17 - 18 | µg/kg | - | - | - | - |
| Herbicides | Dinitrobutyl Phenol | 88-85-7 | 0 / 5 | - | - | 9.1 - 9.4 | 24 - 25 | µg/kg | - | - | - | - |
| Herbicides | MCPA | 94-74-6 | 0 / 14 | - | - | 770 - 810 | 2500 - 2700 | µg/kg | - | - | - | - |
| Herbicides | MCPP | 93-65-2 | 0 / 14 | - | - | 760 - 800 | 2500 - 2700 | µg/kg | - | - | - | - |
| Herbicides | Silvex (2,4,5-TP) | 93-72-1 | 0 / 13 | - | - | 0.76 - 0.8 | 1.7 - 1.8 | µg/kg | - | - | - | - |
| Hexavalent Chromium | Chromium (Hexavalent Compounds) | 18540-29-9 | 6 / 12 | 0.29 J Z | 0.62 | 0.14 - 0.15 | 0.41 - 0.44 | mg/kg | 5C_DG-651 | LL | 7199 | 0.5 |
| Mercury | Mercury | 7439-97-6 | 78 / 123 | 0.01 J Z | 0.375 | 0.0095 - 0.0121 | 0.0158 - 0.0202 | mg/kg | NBZ_DG-566 | LL | 7471B | 0 - 0.5 |
| Metals | Aluminum | 7429-90-5 | 123 / 123 | 6530 | 31500 | 4.57 - 8.85 | 39 - 49.1 | mg/kg | 5B_DG-836 | LL | 6010C | 15 - 16 |
| Metals | Antimony | 7440-36-0 | 0 / 123 | - | - | 0.332 - 0.908 | 3.9 - 4.91 | mg/kg | - | - | - | - |
| Metals | Arsenic | 7440-38-2 | 119 / 123 | 0.941 J Z | 35.4 | 0.645 - 0.859 | 3.9 - 4.91 | mg/kg | 5B_DG-842 | LL | 6010C | 4 - 5 |

**Table 3-3**
**Summary of Analytical Results for Chemicals - Validated Data**
**Combined Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals | Barium | 7440-39-3 | 123 / 123 | 39.2 | 247 J FD, E, Q | 0.0321 - 0.0405 | 0.974 - 1.23 | mg/kg | 5A_DG-874 | LL | 6010C | 4 - 5 |
| Metals | Beryllium | 7440-41-7 | 123 / 123 | 0.281 J Z | 2.19 | 0.0652 - 0.0822 | 0.974 - 1.23 | mg/kg | NBZ_DG-581 | LL | 6010C | 9 - 10 |
| Metals | Boron | 7440-42-8 | 67 / 123 | 0.927 J Z | 18 | 0.818 - 4.46 | 9.74 - 53.1 | mg/kg | 8_DG-611 | LL | 6010C | 0.5 |
| Metals | Cadmium | 7440-43-9 | 47 / 123 | 0.1 J Z | 1.26 | 0.0332 - 0.0932 | 0.974 - 1.23 | mg/kg | 5D_DG-584 | LL | 6010C | 0 - 0.5 |
| Metals | Calcium | 7440-70-2 | 123 / 123 | 1850 | 53400 J E | 3.25 - 4.1 | 19.5 - 24.5 | mg/kg | 8_DG-611 | LL | 6010C | 0.5 |
| Metals | Chromium | 7440-47-3 | 123 / 123 | 8.11 | 42.3 J Q | 0.111 - 0.196 | 2.92 - 3.68 | mg/kg | 5D_DG-585 | LL | 6010C | 4 - 5 |
| Metals | Cobalt | 7440-48-4 | 123 / 123 | 2.44 | 12.9<br>12.9 | 0.0964 - 0.121 | 0.974 - 1.23 | mg/kg | NBZ_DG-581<br>NBZ_DG-581 | LL<br>LL | 6010C<br>6010C | 13 - 14<br>4 - 5 |
| Metals | Copper | 7440-50-8 | 123 / 123 | 4.23 | 37.5 | 0.282 - 0.356 | 1.95 - 2.45 | mg/kg | 5D_DG-584 | LL | 6010C | 0 - 0.5 |
| Metals | Iron | 7439-89-6 | 123 / 123 | 12000 | 60400 | 3.36 - 20.3 | 39 - 224 | mg/kg | NBZ_DG-581 | LL | 6010C | 9 - 10 |
| Metals | Lead | 7439-92-1 | 123 / 123 | 2.56 J E, Z | 24.4 | 0.487 - 0.613 | 2.92 - 3.68 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Lithium | 7439-93-2 | 123 / 123 | 11.3 | 69.2 | 0.33 - 0.68 | 3.9 - 4.9 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Magnesium | 7439-95-4 | 123 / 123 | 2670 | 11900 | 1.63 - 2.05 | 9.74 - 12.3 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Manganese | 7439-96-5 | 123 / 123 | 141 | 681 | 0.0808 - 0.102 | 0.974 - 1.23 | mg/kg | 5C_DG-757 | LL | 6010C | 8 - 9 |
| Metals | Molybdenum | 7439-98-7 | 57 / 123 | 0.174 J Z | 10.7 | 0.166 - 0.209 | 1.95 - 2.45 | mg/kg | NBZ_DG-562 | LL | 6010C | 0 - 0.5 |
| Metals | Nickel | 7440-02-0 | 123 / 123 | 4.86 | 32.9 J A | 0.127 - 0.159 | 1.95 - 2.45 | mg/kg | 5D_DG-585 | LL | 6010C | 4 - 5 |
| Metals | Phosphorus | 7723-14-0 | 123 / 123 | 126 | 776 | 0.322 - 3.55 | 9.74 - 12.3 | mg/kg | NBZ_DG-581 | LL | 6010C | 13 - 14 |
| Metals | Potassium | 7440-09-7 | 123 / 123 | 1290 J Q | 6150 J Q | 8.12 - 13.7 | 97.4 - 123 | mg/kg | 8_DG-611 | LL | 6010C | 0.5 |
| Metals | Selenium | 7782-49-2 | 97 / 123 | 0.1 J Z | 1.04 | 0.0974 - 0.123 | 0.39 - 0.491 | mg/kg | NBZ_DG-562 | LL | 6020A | 0 - 0.5 |
| Metals | Silver | 7440-22-4 | 98 / 123 | 0.026 J Q, E, Z | 3.33 | 0.0201 - 0.0319 | 0.195 - 0.245 | mg/kg | 5D_DG-584 | LL | 6020A | 0 - 0.5 |
| Metals | Sodium | 7440-23-5 | 123 / 123 | 51.8 J Z | 1890 | 16.3 - 20.5 | 97.4 - 123 | mg/kg | 5B_DG-843 | LL | 6010C | 4 - 5 |
| Metals | Strontium | 7440-24-6 | 123 / 123 | 9.45 | 108 | 0.0576 - 0.179 | 0.39 - 1.05 | mg/kg | 8_DG-611 | LL | 6020A | 0.5 |
| Metals | Thallium | 7440-28-0 | 123 / 123 | 0.126 J Z | 0.524 | 0.0292 - 0.0368 | 0.195 - 0.245 | mg/kg | NBZ_DG-581 | LL | 6020A | 9 - 10 |
| Metals | Tin | 7440-31-5 | 0 / 123 | - | - | 0.214 - 0.455 | 9.74 - 12.3 | mg/kg | - | - | - | - |
| Metals | Titanium | 7440-32-6 | 123 / 123 | 535 | 2170 | 0.166 - 0.903 | 0.974 - 5.31 | mg/kg | 5B_DG-841 | LL | 6010C | 9 - 10 |
| Metals | Vanadium | 7440-62-2 | 123 / 123 | 20.1 | 78.8 | 0.0917 - 0.159 | 0.974 - 1.23 | mg/kg | NBZ_DG-581 | LL | 6010C | 9 - 10 |
| Metals | Zinc | 7440-66-6 | 123 / 123 | 32.4 | 210 J E | 0.195 - 0.275 | 3.9 - 4.91 | mg/kg | 5A_DG-587 | LL | 6010C | 0.5 |
| Metals | Zirconium | 7440-67-7 | 41 / 123 | 0.89 J Z | 9.28 | 0.816 - 1.03 | 4.87 - 6.13 | mg/kg | NBZ_DG-581 | LL | 6010C | 13 - 14 |
| Moisture Content | Moisture | MOIST | 230 / 230 | 0.51 | 19.3 | 0.1 - 0.1 | 0.1 - 0.1 | % | NBZ_DG-562 | LL | 160.3M | 0 - 0.5 |
| PAHs | 1-Methylnaphthalene | 90-12-0 | 27 / 123 | 0.71 J Z | 280 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | 2-Methylnaphthalene | 91-57-6 | 36 / 123 | 0.69 J Z | 250 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | Acenaphthene | 83-32-9 | 7 / 123 | 0.98 J Z | 29 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Acenaphthylene | 208-96-8 | 10 / 123 | 0.35 J Z<br>0.35 J Z | 29 | 0.33 - 3.5 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Anthracene | 120-12-7 | 31 / 123 | 0.35 J Z | 130 | 0.33 - 3.5 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Benzo(a)anthracene | 56-55-3 | 42 / 123 | 0.71 J Z | 430 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(a)pyrene | 50-32-8 | 43 / 123 | 0.69 J Z | 680 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(b)fluoranthene | 205-99-2 | 59 / 123 | 0.72 J Z | 2600 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(e)pyrene | 192-97-2 | 17 / 123 | 3.8 J Z | 1100 | 3.3 - 170 | 17 - 860 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(g,h,i)perylene | 191-24-2 | 33 / 123 | 0.74 J Z | 590 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Benzo(k)fluoranthene | 207-08-9 | 43 / 123 | 0.75 J Z | 250 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Bis(2-ethylhexyl)phthalate | 117-81-7 | 45 / 123 | 6.4 J Z | 87 | 6 - 63 | 18 - 190 | µg/kg | 5C_DG-748 | LL | 8270D SIM | 4 - 5 |
| PAHs | Butylbenzylphthalate | 85-68-7 | 11 / 123 | 6.4 J Z | 120 | 6 - 63 | 18 - 190 | µg/kg | NBZ_DG-565 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Chrysene | 218-01-9 | 71 / 123 | 0.38 J Z | 2000 | 0.33 - 17 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Dibenzo(a,h)anthracene | 53-70-3 | 16 / 123 | 0.75 J Z | 190 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Diethylphthalate | 84-66-2 | 1 / 123 | 7.2 J Z | 7.2 J Z | 6 - 63 | 18 - 190 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | Dimethylphthalate | 131-11-3 | 0 / 123 | - | - | 6 - 63 | 18 - 190 | µg/kg | - | - | - | - |
| PAHs | Di-n-butylphthalate | 84-74-2 | 3 / 123 | 6.2 J Z | 7.6 J Z | 6 - 63 | 18 - 190 | µg/kg | 6_DG-686 | LL | 8270D SIM | 0.5 |
| PAHs | Di-n-octylphthalate | 117-84-0 | 4 / 123 | 7.9 J Z | 10 J Z | 6 - 63 | 18 - 190 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Fluoranthene | 206-44-0 | 64 / 123 | 0.7 J Z | 470 | 0.67 - 7.7 | 1.7 - 19 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Fluorene | 86-73-7 | 18 / 123 | 0.79 J Z | 19 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PAHs | Indeno(1,2,3-cd)pyrene | 193-39-5 | 26 / 123 | 0.67 J Z | 770 | 0.67 - 34 | 1.7 - 84 | µg/kg | 5B_DG-798 | LL | 8270D SIM | 0 - 0.5 |
| PAHs | Morpholine | 110-91-8 | 0 / 8 | - | - | 20 - 22 | 20 - 22 | µg/kg | - | - | - | - |
| PAHs | Naphthalene | 91-20-3 | 40 / 123 | 0.69 J Z | 76 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | N-Nitrosodimethylamine | 62-75-9 | 1 / 123 | 4.6 | 4.6 | 0.67 - 7 | 1.7 - 18 | µg/kg | 5C_DG-503 | LL | 8270D SIM | 5 |
| PAHs | Phenanthrene | 85-01-8 | 61 / 123 | 0.68 J Z | 700 | 0.67 - 7.7 | 1.7 - 19 | µg/kg | 5B_DG-699 | LL | 8270D SIM | 0.5 |
| PAHs | Pyrene | 129-00-0 | 63 / 123 | 0.7 J Z | 550 | 0.67 - 7.7 | 1.7 - 19 | µg/kg | 5B_DG-839 | LL | 8270D SIM | 15.5 - 16.5 |
| PCB/PCTs | Aroclor 1016 | 12674-11-2 | 0 / 130 | - | - | 3.3 - 8.2 | 17 - 21 | µg/kg | - | - | - | - |

**Table 3-3**
**Summary of Analytical Results for Chemicals - Validated Data**
**Combined Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PCB/PCTs | Aroclor 1221 | 11104-28-2 | 0 / 130 | - | - | 5.1 - 6.3 | 17 - 21 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1232 | 11141-16-5 | 0 / 130 | - | - | 4.1 - 10 | 17 - 21 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1242 | 53469-21-9 | 0 / 130 | - | - | 4.1 - 10 | 17 - 21 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1248 | 12672-29-6 | 7 / 130 | 6.7 J S, Z | 61 | 3.3 - 4.1 | 17 - 21 | µg/kg | 5B_DG-839 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1254 | 11097-69-1 | 26 / 130 | 6.5 J Z | 110 | 4.4 - 5.4 | 17 - 21 | µg/kg | 5D_DG-584 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1260 | 11096-82-5 | 8 / 130 | 6.9 J Z | 130 | 3.9 - 4.8 | 17 - 21 | µg/kg | 5B_DG-841 | LL | 8082A | 0 - 0.5 |
| PCB/PCTs | Aroclor 1262 | 37324-23-5 | 0 / 130 | - | - | 3.3 - 37 | 17 - 190 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 1268 | 11100-14-4 | 0 / 130 | - | - | 3.3 - 37 | 17 - 190 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5432 | 63496-31-1 | 0 / 130 | - | - | 9.9 - 12 | 33 - 41 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5442 | 12642-23-8 | 0 / 130 | - | - | 9.9 - 110 | 33 - 370 | µg/kg | - | - | - | - |
| PCB/PCTs | Aroclor 5460 | 11126-42-4 | 5 / 130 | 19 J Z | 41 | 9.9 - 12 | 33 - 41 | µg/kg | 5A_DG-730 | LL | 8082A | 0.5 |
| Perchlorate | Perchlorate | 14797-73-0 | 0 / 27 | - | - | 2.1 - 2.3 | 5.1 - 5.6 | µg/kg | - | - | - | - |
| Pesticides | 4,4'-DDD | 72-54-8 | 1 / 30 | 1.4 J Z | 1.4 J Z | 0.33 - 39 | 1.7 - 39 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | 4,4'-DDE | 72-55-9 | 9 / 30 | 0.44 J Z | 550 | 0.33 - 17 | 1.7 - 86 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | 4,4'-DDT | 50-29-3 | 10 / 30 | 0.39 J Z | 45 J Z | 0.35 - 18 | 1.7 - 86 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Aldrin | 309-00-2 | 0 / 30 | - | - | 0.17 - 0.88 | 0.83 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Alpha-Bhc | 319-84-6 | 0 / 30 | - | - | 0.17 - 0.88 | 0.83 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Beta-Bhc | 319-85-7 | 2 / 30 | 1.3 J Z | 1.4 J Z | 0.97 - 4.9 | 1.9 - 9.8 | µg/kg | 5C_DG-655 | LL | 8081B | 0.5 |
| Pesticides | Chlordane | 57-74-9 | 0 / 30 | - | - | 4 - 21 | 17 - 88 | µg/kg | - | - | - | - |
| Pesticides | Delta-Bhc | 319-86-8 | 0 / 30 | - | - | 0.45 - 2.3 | 0.83 - 4.3 | µg/kg | - | - | - | - |
| Pesticides | Dieldrin | 60-57-1 | 1 / 30 | 7 | 7 | 0.33 - 2.8 | 1.7 - 8.8 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Endosulfan I | 959-98-8 | 2 / 30 | 0.39 J Z | 2.7 J Z | 0.22 - 1.1 | 0.83 - 4.3 | µg/kg | 5B_DG-699 | LL | 8081B | 0.5 |
| Pesticides | Endosulfan II | 33213-65-9 | 1 / 30 | 0.56 J Z | 0.56 J Z | 0.33 - 1.7 | 1.7 - 8.8 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Endosulfan Sulfate | 1031-07-8 | 2 / 30 | 1.1 J Z | 4.6 J Z | 0.33 - 1.7 | 1.7 - 8.8 | µg/kg | 5B_DG-699 | LL | 8081B | 0.5 |
| Pesticides | Endrin | 72-20-8 | 0 / 30 | - | - | 0.33 - 3 | 1.7 - 8.8 | µg/kg | - | - | - | - |
| Pesticides | Endrin Aldehyde | 7421-93-4 | 1 / 30 | 0.79 J Z | 0.79 J Z | 0.33 - 1.7 | 1.7 - 8.8 | µg/kg | NBZ_DG-558 | LL | 8081B | 0 - 0.5 |
| Pesticides | Endrin Ketone | 53494-70-5 | 1 / 30 | 0.92 J Z | 0.92 J Z | 0.6 - 3.1 | 1.8 - 9.3 | µg/kg | 5B_DG-707 | LL | 8081B | 0.5 |
| Pesticides | Gamma-Bhc (Lindane) | 58-89-9 | 2 / 30 | 0.21 J Z | 0.34 J Z | 0.17 - 0.88 | 0.83 - 4.3 | µg/kg | NBZ_DG-562 | LL | 8081B | 0 - 0.5 |
| Pesticides | Heptachlor | 76-44-8 | 2 / 30 | 0.54 J Z | 1.2 J Z | 0.17 - 0.88 | 0.83 - 4.3 | µg/kg | 5B_DG-699 | LL | 8081B | 0.5 |
| Pesticides | Heptachlor Epoxide | 1024-57-3 | 1 / 30 | 0.24 J Z | 0.24 J Z | 0.17 - 0.88 | 0.83 - 4.3 | µg/kg | NBZ_DG-562 | LL | 8081B | 0 - 0.5 |
| Pesticides | Methoxychlor | 72-43-5 | 1 / 30 | 3.4 J Z | 3.4 J Z | 1.7 - 8.8 | 6.7 - 35 | µg/kg | 5B_DG-699 | LL | 8081B | 3 |
| Pesticides | Mirex | 2385-85-5 | 0 / 30 | - | - | 0.35 - 1.8 | 1.7 - 8.8 | µg/kg | - | - | - | - |
| Pesticides | Technical Toxaphene | 8001-35-2 | 0 / 30 | - | - | 14 - 190 | 33 - 190 | µg/kg | - | - | - | - |
| pH | pH | pH | 123 / 123 | 4.52 | 11.9 | 0.01 - 0.01 | 0.01 - 0.01 | pH | 5B_DG-839 | LL | 9045M | 15.5 - 16.5 |
| SVOC | 1,1'-Biphenyl | 92-52-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,2,4-Trichlorobenzene | 120-82-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,2-Dichlorobenzene | 95-50-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,2-Diphenylhydrazine | 122-66-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,3-Dichlorobenzene | 541-73-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 1,4-Dichlorobenzene | 106-46-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4,5-Trichlorophenol | 95-95-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4,6-Trichlorophenol | 88-06-2 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4-Dichlorophenol | 120-83-2 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4-Dimethylphenol | 105-67-9 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2,4-Dinitrophenol | 51-28-5 | 0 / 12 | - | - | 310 - 320 | 670 - 1100 | µg/kg | - | - | - | - |
| SVOC | 2,6-Dichlorophenol | 87-65-0 | 0 / 11 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-butoxyethanol | 111-76-2 | 0 / 4 | - | - | 170 - 180 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 2-Chloronaphthalene | 91-58-7 | 0 / 12 | - | - | 7 - 7 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Chlorophenol | 95-57-8 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Methylphenol | 95-48-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Nitroaniline | 88-74-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-Nitrophenol | 88-75-5 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 2-phenoxyethanol | 122-99-6 | 0 / 4 | - | - | 170 - 180 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 3,3'-Dichlorobenzidine | 91-94-1 | 0 / 12 | - | - | 100 - 110 | 340 - 350 | µg/kg | - | - | - | - |
| SVOC | 3,5-Dimethylphenol | 108-68-9 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 3-Nitroaniline | 99-09-2 | 0 / 12 | - | - | 68 - 71 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 4,6-Dinitro-2-methylphenol | 534-52-1 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | 4-Bromophenyl-phenylether | 101-55-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |

**Table 3-3**
**Summary of Analytical Results for Chemicals - Validated Data**
**Combined Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVOC | 4-Chloro-3-methylphenol | 59-50-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Chloroaniline | 106-47-8 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Chlorophenyl-phenylether | 7005-72-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Methylphenol | 106-44-5 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | 4-Nitroaniline | 100-01-6 | 0 / 12 | - | - | 68 - 71 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | 4-Nitrophenol | 100-02-7 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | Aniline | 62-53-3 | 0 / 12 | - | - | 170 - 180 | 340 - 530 | µg/kg | - | - | - | - |
| SVOC | Benzidine | 92-87-5 | 0 / 12 | - | - | 710 - 740 | 1700 - 3500 | µg/kg | - | - | - | - |
| SVOC | Benzo(a)anthracene | 56-55-3 | 2 / 2 | 4 J Z<br>4 J Z | 4 J Z<br>4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651<br>5C_DG-651 | LL<br>LL | 8270D<br>8270D | 0.5<br>5 |
| SVOC | Benzo(a)pyrene | 50-32-8 | 5 / 5 | 4 J Z<br>4 J Z<br>4 J Z<br>4 J Z<br>4 J Z | 4 J Z<br>4 J Z<br>4 J Z<br>4 J Z<br>4 J Z | 3 - 4 | 17 - 18 | µg/kg | 5C_DG-653<br>5C_DG-651<br>5C_DG-651<br>5C_DG-651<br>5C_DG-651 | LL<br>LL<br>LL<br>LL<br>LL | 8270D<br>8270D<br>8270D<br>8270D<br>8270D | 0.5<br>0.5<br>10<br>15<br>5 |
| SVOC | Benzo(b)fluoranthene | 205-99-2 | 5 / 5 | 4 J Z | 5 J Z<br>5 J Z<br>5 J Z<br>5 J Z | 3 - 4 | 17 - 18 | µg/kg | 5C_DG-653<br>5C_DG-651<br>5C_DG-651<br>5C_DG-651 | LL<br>LL<br>LL<br>LL | 8270D<br>8270D<br>8270D<br>8270D | 0.5<br>0.5<br>10<br>5 |
| SVOC | Benzo(g,h,i)perylene | 191-24-2 | 1 / 1 | 4 J Z | 4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 0.5 |
| SVOC | Benzoic Acid | 65-85-0 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | Benzyl Alcohol | 100-51-6 | 0 / 12 | - | - | 170 - 180 | 340 - 530 | µg/kg | - | - | - | - |
| SVOC | bis(2-chloroethoxy)methane | 111-91-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | bis(2-chloroethyl) ether | 111-44-4 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | bis(2-chloroisopropyl) ether | 39638-32-9 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Carbazole | 86-74-8 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Chrysene | 218-01-9 | 1 / 1 | 5 J Z | 5 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 0.5 |
| SVOC | Dibenzofuran | 132-64-9 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Diphenylamine | NDPA122-39-4 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Fluoranthene | 206-44-0 | 2 / 2 | 4 J Z<br>4 J Z | 4 J Z<br>4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651<br>5C_DG-651 | LL<br>LL | 8270D<br>8270D | 0.5<br>5 |
| SVOC | Hexachlorobenzene | 118-74-1 | 0 / 12 | - | - | 3 - 4 | 17 - 18 | µg/kg | - | - | - | - |
| SVOC | Hexachlorobutadiene | 87-68-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Hexachlorocyclopentadiene | 77-47-4 | 0 / 12 | - | - | 170 - 180 | 510 - 530 | µg/kg | - | - | - | - |
| SVOC | Hexachloroethane | 67-72-1 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Isophorone | 78-59-1 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Nitrobenzene | 98-95-3 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | N-Nitroso-di-n-propylamine | 621-64-7 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | N-Nitrosodiphenylamine | 86-30-6 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Pentachlorophenol | 87-86-5 | 0 / 12 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Phenanthrene | 85-01-8 | 1 / 1 | 4 J Z | 4 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 5 |
| SVOC | Phenol | 108-95-2 | 0 / 12 | - | - | 17 - 18 | 34 - 35 | µg/kg | - | - | - | - |
| SVOC | Pyrene | 129-00-0 | 2 / 2 | 4 J Z | 5 J Z | 3 - 3 | 18 - 18 | µg/kg | 5C_DG-651 | LL | 8270D | 0.5 |
| SVOC | Pyridine | 110-86-1 | 0 / 12 | - | - | 68 - 71 | 170 - 180 | µg/kg | - | - | - | - |
| SVOC | Tetralin | 119-64-2 | 0 / 4 | - | - | 34 - 35 | 170 - 180 | µg/kg | - | - | - | - |
| Terphenyls | m-Terphenyl | 92-06-8 | 1 / 12 | 0.51 J Q | 0.51 J Q | 0.068 - 0.071 | 0.17 - 0.18 | mg/kg | 5C_DG-655 | LL | 8015B | 0.5 |
| Terphenyls | o-Terphenyl | 84-15-1 | 0 / 12 | - | - | 0.068 - 0.071 | 0.17 - 0.18 | mg/kg | - | - | - | - |
| Terphenyls | p-Terphenyl | 92-94-4 | 1 / 12 | 0.98 J Q | 0.98 J Q | 0.068 - 0.071 | 0.17 - 0.18 | mg/kg | 5C_DG-655 | LL | 8015B | 0.5 |
| TPH-EFH | EFH (C12-C14) | PHCC12C14 | 3 / 154 | 2.4 J Z | 7.6 | 2 - 11 | 5 - 26 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH | EFH (C15-C20) | PHCC15C20 | 46 / 154 | 2.1 J Z<br>2.1 J Z | 36 | 2 - 11 | 5 - 26 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH | EFH (C21-C30) | PHCC21C30 | 108 / 154 | 2.3 J Z | 210 | 2 - 11 | 5 - 26 | mg/kg | NBZ_DG-566 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C30-C40) | PHCC30C40 | 104 / 154 | 5 J Z<br>5 J Z | 400 | 4 - 21 | 10 - 53 | mg/kg | NBZ_DG-566 | LL | 8015M | 0 - 0.5 |
| TPH-EFH | EFH (C8-C11) | PHCC8C11 | 6 / 154 | 2.1 J Z | 13 J Z | 2 - 11 | 5 - 26 | mg/kg | 5D_DG-612 | LL | 8015M | 0 - 0.5 |
| TPH-EFH-SilicaGel | EFH (C12-C14) w/ Silica Gel | PHCC12C14SILICA | 2 / 142 | 3.3 J L, Z | 4.6 J L, Z | 2 - 4.2 | 5 - 11 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-EFH-SilicaGel | EFH (C15-C20) w/ Silica Gel | PHCC15C20SILICA | 5 / 142 | 4.6 J L, Z | 16 J L | 2 - 4.2 | 5 - 11 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |

**Table 3-3**
**Summary of Analytical Results for Chemicals - Validated Data**
**Combined Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-EFH-SilicaGel | EFH (C21-C30) w/ Silica Gel | PHCC21C30SILICA | 55 / 142 | 2.1 J L, Z<br>2.1 J L, Z<br>2.1 J Z | 94 J L | 2 - 4.2 | 5 - 11 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |
| TPH-EFH-SilicaGel | EFH (C30-C40) w/ Silica Gel | PHCC30C40SILICA | 43 / 142 | 4.2 J Z | 210 | 4 - 8.4 | 9.9 - 21 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |
| TPH-EFH-SilicaGel | EFH (C8-C11) w/ Silica Gel | PHCC8C11SILICA | 1 / 142 | 5.6 J L | 5.6 J L | 2 - 4.2 | 5 - 11 | mg/kg | 5B_DG-699 | LL | 8015M | 0.5 |
| TPH-GRO | Gasoline Range Organics (C5-C12) | GROC5C12 | 1 / 76 | 2.2 | 2.2 | 0.2 - 1.9 | 0.9 - 9.4 | mg/kg | 5B_DG-836 | LL | 8015M | 19 - 20 |
| VOC | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,1-Trichloroethane | 71-55-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1,2-Trichloroethane | 79-00-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1-Dichloroethane | 75-34-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1-Dichloroethene | 75-35-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,1-Dichloropropene | 563-58-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,3-Trichlorobenzene | 87-61-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,3-Trichloropropane | 96-18-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,4-Trichlorobenzene | 120-82-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2,4-Trimethylbenzene | 95-63-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dibromoethane | 106-93-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dichlorobenzene | 95-50-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dichloroethane | 107-06-2 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,2-Dichloropropane | 78-87-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,3,5-Trimethylbenzene | 108-67-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,3-Dichlorobenzene | 541-73-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,3-Dichloropropane | 142-28-9 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1,4-Dichlorobenzene | 106-46-7 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 1-Chlorohexane | 544-10-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2,2-Dichloropropane | 594-20-7 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2-Butanone (MEK) | 78-93-3 | 1 / 68 | 4 J Z | 4 J Z | 4 - 5 | 9 - 12 | µg/kg | 5CSV_DG-525 | LL | 8260B | 5 - 6 |
| VOC | 2-Chloro-1,1,1-trifluoroethane | 75-88-7 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2-Chloroethyl Vinyl Ether | 110-75-8 | 0 / 68 | - | - | 2 - 2 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | 2-Chlorotoluene | 95-49-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 2-Hexanone | 591-78-6 | 0 / 68 | - | - | 3 - 4 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | 2-Phenylbutane | 135-98-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 4-Chlorotoluene | 106-43-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0 / 68 | - | - | 3 - 4 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | Acetone | 67-64-1 | 3 / 68 | 11 J Z | 32 | 6 - 9 | 18 - 25 | µg/kg | 5CSV_DG-525 | LL | 8260B | 5 - 6 |
| VOC | Acrolein | 107-02-8 | 0 / 68 | - | - | 18 - 25 | 89 - 120 | µg/kg | - | - | - | - |
| VOC | Acrylonitrile | 107-13-1 | 0 / 68 | - | - | 4 - 5 | 18 - 25 | µg/kg | - | - | - | - |
| VOC | Benzene | 71-43-2 | 0 / 68 | - | - | 0.4 - 0.6 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromobenzene | 108-86-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromochloromethane | 74-97-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromodichloromethane | 75-27-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromoform | 75-25-2 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Bromomethane | 74-83-9 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Carbon Disulfide | 75-15-0 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Carbon Tetrachloride | 56-23-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chlorobenzene | 108-90-7 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chloroethane | 75-00-3 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chloroform | 67-66-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chloromethane | 74-87-3 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Chlorotrifluoroethylene | 79-38-9 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | cis-1,2-Dichloroethene | 156-59-2 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | cis-1,3-Dichloropropene | 10061-01-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Cymene | 99-87-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Di isopropyl Ether | 108-20-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Dibromochloromethane | 124-48-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |

**Table 3-3**
**Summary of Analytical Results for Chemicals - Validated Data**
**Combined Soils - Go-Backs, Trenches and Soil Vapor Locations - Phase 3**

| Group | Chemical | CAS No | Detection Frequency | Minimum Concentration | Maximum Concentration | Range of Method Detection Limit | Range of Method Reporting Limit | Unit | Location of Maximum Concentration | Lab of Maximum Concentration | Method of Maximum Concentration | Depth of Maximum Concentration (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOC | Dibromomethane | 74-95-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Dichlorodifluoromethane | 75-71-8 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Ethylbenzene | 100-41-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Hexachloro-1,3-butadiene | 87-68-3 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Isopropylbenzene | 98-82-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | m,p-Xylene | 179601-23-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Methyl Iodide | 74-88-4 | 0 / 68 | - | - | 3 - 4 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Methyl Tert-Butyl Ether | 1634-04-4 | 0 / 68 | - | - | 0.4 - 0.6 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Methylene Chloride | 75-09-2 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | n-Butylbenzene | 104-51-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | n-Propylbenzene | 103-65-1 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | o-Xylene | 95-47-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Styrene | 100-42-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | tert-Butyl ethyl ether | 637-92-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | tert-Butylbenzene | 98-06-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Tertiary amyl methyl ether | 994-05-8 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Tertiary butyl alcohol | 75-65-0 | 0 / 68 | - | - | 18 - 25 | 44 - 62 | µg/kg | - | - | - | - |
| VOC | Tetrachloroethene | 127-18-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Toluene | 108-88-3 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | trans-1,2-Dichloroethene | 156-60-5 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | trans-1,3-Dichloropropene | 10061-02-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Trichloroethene | 79-01-6 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Trichlorofluoromethane | 75-69-4 | 0 / 68 | - | - | 2 - 2 | 4 - 6 | µg/kg | - | - | - | - |
| VOC | Vinyl Acetate | 108-05-4 | 0 / 68 | - | - | 2 - 2 | 9 - 12 | µg/kg | - | - | - | - |
| VOC | Vinyl Chloride | 75-01-4 | 0 / 68 | - | - | 0.9 - 1 | 4 - 6 | µg/kg | - | - | - | - |

**Notes**

LL - Eurofins Lancaster Laboratory
µg/kg- microgram per kilogram
mg/kg - milligram per kilogram
ng/kg - nanogram per kilogram
J - Result is an estimated value
% - percent
CAS = chemical abstract service
TPH = total petroleum hydrocarbon
GRO = gasoline range organic
EFH = extractable fuel hydrocarbon
HpCDF = heptachlorodibenzofuran
HxCDF = hexachlorodibenzofuran
PeCDF = pentachlorodibenzofuran
TCDD = tetrachlorodibenzodioxin
OCDD = octachlorodibenzodioxin
OCDF = octachlorodibenzofuran
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
2,4,5-T = 2,4,5-trichlorophenoxyacetic acid
2,4-D = 2-4-dichlorophenoxyacetic acid
2,4-DB = 2,4-dichlorophenoxy butyric acid
MCPA = 2-methyl-4-chlorophenoxyacetic acid
MCPP = methylchlorophenoxypropionic acid
PAH = polyaromatic hydrocarbon
PCB/PCT = polychlorinated biphenyls/polychlorinated triphenyls
SVOC = semivolatile organic compound
VOC = volatile organic compound
Specific concentration qualifiers are defined in Appendix A

# Section 4
# Data Usability Assessment

The purpose of the DUAR provided in Appendix C and summarized here is to describe the data validation processes performed on the data sets and determine whether the sample results meet the data quality objectives (DQOs) outlined in the Phase 3 Master FSP (CDM Smith 2012a) and QAPP (CDM Smith 2012c).

## 4.1 Usability Summary

For the Phase 3 Go-Backs, Trenches and Soil Vapor Location samples data usability assessment, 65 data sets, or SDGs were reviewed. An SDG consists of 20 or fewer samples grouped together by analytical method for analyses depending on the time and date the samples were received by the laboratory. The analyses performed are discussed in Section 2.6.1.

Samples were collected and analyzed in accordance with the Master FSP (CDM Smith 2012a), and all the Addendums listed in Section 1 with the exception of the field investigation deviations as stated in Section 2.8.

The validated data for Phase 3 Go-Backs, Trenches and Soil Vapor Location samples are usable as reported with the exception of one triethylene glycol result, 15 herbicide results in 10 samples and one SVOC result (2,6-dichlorophenol). This equates to 0.09057 percent of the results. These rejected results do not impact project objectives and goals. Specific details are provided in the validation reports in Appendix C and Section 4.7 of this report.

## 4.2 Data Validation Procedures

Data were validated by the independent data validation firm Laboratory Data Consultants, Inc. All data validation was conducted in accordance with the following guidance documents:

- *EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 2004)
- *EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA 2008)
- *EPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (EPA 2005)

The data validation strategy was to validate ten percent of the data according to EPA Level IV protocols (all QC parameters and raw data) and the remaining 90 percent according to EPA Level III protocols (all QC parameters except calibrations and raw data). The Level IV determinations also included reviewing ten percent for each laboratory and each method. In order to achieve this, the validators chose appropriate samples in each SDG. Hence, not all samples in some of the SDGs were Level IV validated but they received a mixture of Level IV and Level III review.

Table 4-1 presents all SDGs that include Go-Back, Trenches, and Soil Vapor Location soil samples and those SDGs that were validated as Level III or Level IV. Some SDGs may contain samples from other

subareas, but all samples in an SDG were validated together. An index of samples associated with each SDG is presented at the beginning of Appendix C.

**Table 4-1 Sample Delivery Groups and Validation Levels for Go-Backs, Trenches and Soil Vapor Locations**

| Sample Delivery Group | Level of Validation Performed | CDM Smith Review |
|---|---|---|
| PH158 | Level IV | |
| PH159 | Level III | Yes |
| PH172 | Level III | |
| PH173 | Level IV | |
| PH174 | Level III | Yes |
| PH175 | Level III | |
| PH176 | Level III | |
| PH177 | Level III | |
| PH178 | Level IV | |
| PH180 | Level III | Yes |
| PH181 | Level III | |
| PH182 | Level III | |
| PH183 | Level III | |
| PH185 | Level IV | |
| PH186 | Level III | |
| PH188 | Level III | |
| PH189 | Level III | |
| PH190 | Level III | |
| PH191 | Level III | |
| PH192 | Level III | |
| PH193 | Level IV | Yes |
| PH194 | Level III | |
| PH195 | Level III | |
| PH196 | Level III | |
| PH197 | Level III | |
| PH198 | Level III | |
| PH199 | Level III | |
| PH200 | Level IV | Yes |
| PH201 | Level III | |
| PH203 | Level III | |
| PH204 | Level III | |
| PH206 | Level III | |
| PH207 | Level III | |
| PH209 | Level III | |
| PH211 | Level III | |
| PH212 | Level IV | |
| PH214 | Level III | |

**Table 4-1 Sample Delivery Groups and Validation Levels for Go-Backs, Trenches and Soil Vapor Locations**

| Sample Delivery Group | Level of Validation Performed | CDM Smith Review |
|---|---|---|
| PH216 | Level III | |
| PH217 | Level III | |
| PH219 | Level IV | |
| PH220 | Level III | |
| PH221 | Level III | |
| PH222 | Level III | |
| PH223 | Level III | Yes |
| PH224 | Level IV | |
| PH226 | Level III | |
| PH227 | Level III | |
| PH228 | Level III | |
| PH229 | Level III | |
| PH230 | Level III | |
| PH231 | Level III | |
| PH233 | Level III | |
| PH234 | Level IV | Yes |
| PH235 | Level III | |
| PH237 | Level III | |

**Note:** Some SDGs may contain samples from other subareas, but all samples in an SDG were validated together.

To evaluate the quality of the laboratory data and the validation process, CDM Smith's chemists reviewed over 10 percent of the Go-Back, Trenches and Soil Vapor Location soil sample SDGs. The SDGs reviewed are chosen based on methods and level of validation performed by the validation firm. The purpose of the review was to identify any laboratory QC issues not identified by the validation firm or any discrepancies in validation procedures by the validation firm. No additional qualifiers were applied to the data based on CDM Smith's review. The results of this review are provided in Section 4.9.

## 4.3 Quality Assurance Objectives

Quality assurance (QA) objectives for measurement data are expressed in terms of precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS). The QA objectives provide a mechanism for evaluating and measuring data quality.

A review of the collected data is necessary to determine if DQOs established in the Master FSP (CDM Smith 2012a) have been met. The following data measurement tasks were evaluated:

- Specification and adherence to analytical method and reporting limit requirements
- Identification of the appropriate laboratory analytical QC requirements and verification that QC requirements were met

- Verification that measurement performance criteria (representativeness and completeness) for the data were met
- Verification that field procedures were followed, deviations were documented, and a determination of impact on data quality as a result of these deviations

The data validation review determines if the collected data are of sufficient quality to support their intended use.

## 4.4 Summary of Field and Laboratory QA Activities

CDM Smith completed sampling activities for Go-Backs, Trenches, and Soil Vapor Location sampling in accordance with the approved Master FSP (CDM Smith 2012a) and Addendum to the Master FSP (CDM Smith 2012b) except for the surface samples that were collected using the subsurface procedure as discussed in Section 2.8. A total of 241 soil Go-Backs, Trenches, and Soil Vapor Location samples were collected and analyzed from the locations described in Tables 2-1, 2-2 and 2-3. These tables also provide a summary of the samples collected and the laboratory analyses requested. Associated QA activities are described below.

## 4.5 Field QA/QC

The MS/MSDs and field duplicates field QC samples were collected at a frequency of approximately 1 per 20 samples (five percent). During sampling for Go-Backs, Trenches and Soil Vapor Locations, a total of 13 field duplicate/MS/MSD samples were collected equating to approximately 5.2 to 5.8 percent for each sample type. On an individual method basis, the five percent goal was met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a).

***Equipment Rinsate and Field Blanks***

The 24 equipment rinsate blank results collected are presented in Appendix C and a summary of the detected results is presented in Table 4-2 for Go-Backs, Trenches, and Soil Vapor Location samples. Field blank samples were collected from each lot number of ASTM International Type II water used for decontamination. Two field blanks were collected during sampling and one other one was applicable to some of the samples collected during the Go-Back, Trenches and Soil Vapor Location sampling activities. The detected results are presented below in Table 4-3 and all results are reported in Appendix C.

**Table 4-2 Equipment Blank Results for Go-Backs, Trenches and Soil Vapor Location Samples – Detected Results Only**

| EB-011414<br>EQUIPMENT BLANK FDG<br>01/14/2014 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | pg/L | 0.537/10.1 | J |
| 2,3,4,6,7,8-HxCDF | pg/L | 0.404/10.1 | J |
| Barium | mg/L | 0.00036/0.01 | J |
| Diethylphthalate | µg/L | 0.44/1.1 | J |
| Di-n-butylphthalate | µg/L | 0.17/1.1 | J |

**Table 4-2 Equipment Blank Results for Go-Backs, Trenches and Soil Vapor Location Samples – Detected Results Only**

| EB-050814<br>EQUIPMENT BLANK FDG<br>05/08/2014 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | pg/L | 0.146/9.7 | J |
| 2,3,4,6,7,8-HxCDF | pg/L | 0.114/9.7 | J |
| Acenaphthene | µg/L | 0.016/0.05 | J |
| Acenaphthylene | µg/L | 0.021/0.05 | J |
| Boron | mg/L | 0.0084/0.1 | J |
| Diethylphthalate | µg/L | 0.48/1 | J |
| **EB-060514<br>EQUIPMENT BLANK FDG<br>6/05/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1-Methylnaphthalene | µg/L | 0.024/0.05 | J |
| 2-Methylnaphthalene | µg/L | 0.034/0.05 | J |
| Bis(2-ethylhexyl)phthalate | µg/L | 1/1.1 | J |
| Di-n-butylphthalate | µg/L | 0.098/1.1 | J |
| Napthalene | µg/L | 0.072/0.05 | |
| **EB1-051414<br>EQUIPMENT BLANK FDG<br>05/14/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/L | 0.156/2.06 | J |
| Barium | mg/L | 0.00034/0.01 | J |
| Boron | mg/L | 0.0106/0.1 | J |
| Molybdenum | mg/L | 0.0029/0.02 | J |
| Perchlorate | µg/L | 6.4/1 | J |
| **EB1-052214<br>EQUIPMENT BLANK FDG<br>05/22/2104** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1-Methylnaphthalene | µg/L | 0.02/0.05 | J |
| 2-Methylnaphthalene | µg/L | 0.03/0.05 | J |
| Chloroform | µg/L | 0.6/5 | J |
| Diethylphthalate | µg/L | 0.053/1 | J |
| Di-n-butylphthalate | µg/L | 0.09/1 | J |
| Methylene Chloride | µg/L | 7/5 | J |
| Naphthalene | µg/L | 0.11/0.05 | J |

**Table 4-2 Equipment Blank Results for Go-Backs, Trenches and Soil Vapor Location Samples – Detected Results Only**

| EB1-052914<br>EQUIPMENT BLANK TR<br>05/29/2014 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | pg/L | 0.293/9.6 | J |
| 1-Methylnaphthalene | µg/L | 0.023/0.051 | J |
| 2,3,4,7,8-PeCDF | pg/L | 0.216/9.6 | J |
| 2-Methylnaphthalene | µg/L | 0.033/0.051 | J |
| Diethylphthalate | µg/L | 0.057/1 | J |
| Methylene Chloride | µg/L | 5/3 | |
| Molybdenum | mg/L | 0.0054/0.02 | J |
| Naphthalene | µg/L | 0.087/0.051 | |
| Strontium | mg/L | 0.00042/0.002 | J |
| **EB1-061114<br>EQUIPMENT BLANK SV<br>06/11/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| Methylene Chloride | µg/L | 4/3 | |
| **EB1-061214<br>EQUIPMENT BLANK FDG<br>06/12/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1-Methylnaphthalene | µg/L | 0.02/0.056 | J |
| 2,3,4,7,8-PeCDF | pg/L | 0.0938/10.2 | J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/L | 0.0871/2.04 | J |
| 2,4-DB | µg/L | 0.59/0.97 | J |
| 2-Methylnaphthalene | µg/L | 0.027/0.056 | J |
| Beta-BHC | µg/L | 0.017/0.009 | |
| Naphthalene | µg/L | 0.058/0.056 | |
| OCDF | pg/L | 0.74/20.4 | J |
| **EB1-061814<br>EQUIPMENT BLANK FDG<br>06/18/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | pg/L | 29.4/10.4 | |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | pg/L | 1.57/10.4 | J |
| 1,2,3,7,8,9-HxCDF | pg/L | 2.78/10.4 | J |
| 1-Methylnaphthalene | µg/L | 0.011/0.052 | J |
| 2,3,7,8-TCDD | pg/L | 0.812/2.08 | J |
| 2-Butanone (MEK) | µg/L | 3/10 | J |

**Table 4-2 Equipment Blank Results for Go-Backs, Trenches and Soil Vapor Location Samples – Detected Results Only**

| | | | |
|---|---|---|---|
| **EB1-061814 EQUIPMENT BLANK FDG 06/18/2014 (cont.)** | | | |
| 2-Methylnaphthalene | µg/L | 0.015/0.052 | J |
| Boron | mg/L | 0.0061/0.1 | J |
| Cadmium | mg/L | 0.00037/0.01 | J |
| Diethylphthalate | µg/L | 0.11/1 | J |
| Molybdenum | mg/L | 0.01/0.02 | J |
| Naphthalene | µg/L | 0.036/0.052 | J |
| Perchlorate | µg/L | 0.4/1 | J |
| Potassium | mg/L | 0.114/1 | J |
| **EB2-051414 EQUIPMENT BLANK FDG 05/14/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| Perchlorate | µg/L | 0.4/1 | J |
| Potassium | mg/L | 0.114/1 | J |
| **EB2-052214 EQUIPMENT BLANK FDG 05/22/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1-Methylnaphthalene | µg/L | 0.033/0.05 | J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/L | 0.119/1.96 | J |
| 2-Methylnaphthalene | µg/L | 0.052/0.05 | J |
| Di-n-butylphthalate | µg/L | 0.1/1.1 | J |
| Naphthalene | µg/L | 0.15/0.05 | J |
| **EB2-061114 EQUIPMENT BLANK SV 06/11/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| Methylene Chloride | µg/L | 4/3 | |
| **EB2-061214 EQUIPMENT BLANK FDG 06/12/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8,9-HpCDF | pg/L | 0.367/9.86 | J |
| 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | pg/L | 0.251/9.86 | J |
| 1-Methylnaphthalene | µg/L | 0.02/0.06 | J |
| 2,3,4,7,8-PeCDF | pg/L | 0.234/9.86 | J |
| 2-Methylnaphthalene | µg/L | 0.028/0.06 | J |
| Naphthalene | µg/L | 0.058/0.06 | |
| OCDF | pg/L | 1.06/19.7 | J |

**Table 4-2 Equipment Blank Results for Go-Backs, Trenches and Soil Vapor Location Samples – Detected Results Only**

| EB3-052214<br>EQUIPMENT BLANK TR<br>05/22/2014 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/L | 0.203/1.91 | J |
| Calcium | mg/L | 0.15/0.4 | J |
| Diethylphthalate | µg/L | 0.097/1 | J |
| Di-n-butylphthalate | µg/L | 0.1/1 | J |
| Manganese | mg/L | 0.0009/0.01 | J |
| Strontium | mg/L | 0.00046/0.002 | J |
| **EB3-060414<br>EQUIPMENT BLANK TR<br>06/04/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | pg/L | 0.313/9.57 | J |
| 1-Methylnaphthalene | mg/L | 0.02/0.057 | J |
| 2,3,7,8-TCDD | pg/L | 0.262/1.91 | J |
| 2-Methylnaphthalene | µg/L | 0.028/0.057 | J |
| Barium | mg/L | 0.0007/0.01 | J |
| Calcium | mg/L | 0.151/0.4 | J |
| Di-n-butylphthalate | µg/L | 0.14/1.1 | J |
| Naphthalene | µg/L | 0.073/0.057 | |
| Strontium | mg/L | 0.00069/0.002 | J |
| **EB3-061114<br>EQUIPMENT BLANK SV<br>06/11/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 2-Butanone (MEK) | pg/L | 3/10 | J |
| Methylene Chloride | µg/L | 4/3 | |
| **EB4-061114<br>EQUIPMENT BLANK SV<br>06/11/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| Methylene Chloride | µg/L | 4/3 | |

Notes:
Blank result greater than RL
2,4-DB = 2,4-dichlorophenoxy butyric acid
BHC = benzene hexachloride
HxCDF = hexachlorodibenzofuran
OCDF = octachlorodibenzofuran
PeCDF = pentachlorodibenzofuran
RL = Reporting Limit
TCDD = 2,3,7,8-tetrachlorodibenzo-p-dioxin
µg/L = microgram per liter
pg/L = picogram per liter
mg/L = milligram per liter
J = estimated value

**Table 4-3 Field Blank Results for Go-Backs, Trenches and Soil Vapor Locations – Detected Results Only**

| FB-041613<br>Field Blank<br>04/16/2013 | | | |
|---|---|---|---|
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-HxCDF | pg/L | 0.257/9.71 | J |
| 2-Methylnaphthalene | µg/L | 0.012/0.052 | J |
| Chloroform | µg/L | 3/5 | J |
| Di-n-butylphthalate | µg/L | 0.11/1 | J |
| Methylene Chloride | µg/L | 18/5 | |
| Tin | mg/L | 0.0029/0.04 | J |
| **FB-051314<br>Field Blank<br>05/13/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,4,7,8-HxCDF | pg/L | 0.257/9.71 | J |
| **FB-052114<br>Field Blank<br>05/21/2014** | | | |
| **Analyte** | **Units** | **Concentration/RL** | **Final Qualifier** |
| 1,2,3,7,8,9-HxCDF | pg/L | 0.182/9.9 | J |
| 1-Methylnaphthalene | µg/L | 0.022/0.05 | J |
| 2-Methylnaphthalene | µg/L | 0.032/0.05 | J |
| Chloroform | µg/L | 0.7/5 | J |
| Di-n-butylphthalate | µg/L | 0.089/1.1 | J |
| Methylene Chloride | mg/L | 7/5 | |
| Naphthalene (8270D) | µg/L | 0.2/0.5 | J |
| Naphthalene (8270D SIM) | µg/L | 0.11/0.05 | |

Notes:
Blank result greater than RL
HxCDF = hexachlorodibenzofuran
RL = Reporting Limit
µg/L = microgram per liter
pg/L = picogram per liter
mg/L = milligram per liter
J = estimated value

### *Trip Blanks*

Forty-six trip blank samples were shipped with the VOC/TPH Go-Backs, Trenches and Soil Vapor Location samples. The analytical results for the trip blanks collected in association with these sampling activities are presented in Appendix C. No analytes were detected above their respective reporting limits in any of the trip blank samples.

***Temperature Blanks***
Temperature blanks were included with each shipment of samples. Based on validation results all temperature blanks submitted with the Go-Backs, Trenches and Soil Vapor Location samples met criteria.

Data qualifications based on all laboratory and field blank detections, and impacts to the data due to contaminants detected in the blanks, are discussed in Section 4.7.3 and in the Appendix C validation reports.

***Field QC Summary***
As stated previously, on an individual method basis, the five percent goal was met or exceeded for all analyses. Field duplicate and MS/MSD samples met the frequency requirements detailed in the Master FSP (CDM Smith 2012a) for the Phase 3 Go-Backs, Trenches and Soil Vapor Locations sampling program. Further, field QA/QC objectives were attained through the use of appropriate sampling techniques and collection of the required number and frequency of QC samples.

## 4.6 Laboratory QA/QC

Analytical QA/QC was assessed by laboratory QC checks, method blanks, sample custody tracking, sample preservation, adherence to holding times, laboratory control samples (LCSs), MSs, calibration recoveries, surrogates, tuning criteria, second column confirmations, internal standards, serial dilutions, laboratory duplicates, and interference check standards. The majority of the laboratory QC sample criteria met project requirements as indicated in the data validation reports in Appendix C. Outliers were appropriately qualified. For the Go-Backs, Trenches and Soil Vapor Location samples, one triethylene glycol result, 15 herbicide results in 10 samples and one SVOC result (2,6-dichlorophenol) were rejected. Specific details are provided in the validation reports in Appendix C and discussed in Section 4.7.

## 4.7 Data Quality Indicators

This section summarizes the validation performed. Individual SDG validation reports with specific sample detail are provided in Appendix C.

Achievement of the DQOs was determined in part by the use of data quality indicators (DQIs) described in the DUAR in Appendix C. These DQIs for measurement data are expressed in terms of PARCCS. The DQIs provide a mechanism for ongoing control to evaluate and measure data quality throughout the project. These criteria are defined in the sections below.

### 4.7.1 Precision

Precision is the measurement of the ability to obtain the same value on re-analysis of a sample through the entire analytical process. The closer the measurement results, the greater the precision. Precision has nothing to do with accuracy or true values of the sample. Instead, it is focused on random errors inherent in the analysis that stem from the measurement process and are compounded by the non-homogeneous nature of some samples. Precision is measured by analyzing two portions of the sample (sample and duplicate) and then comparing the results. This comparison can be expressed in terms of relative percent difference (RPD). RPD is calculated as the absolute difference between the two measurements divided by the average of the two measurements.

$$RPD = \frac{[(A-B)/\underline{A+B}]}{2} \times 100$$

A condition with this formula is that it depends on the average of the two measurements and the magnitude of the calculated RPD is intimately linked to the magnitude of the results. When sample results are close to the RL, the RPD is greater but does not necessarily indicate that the precision is out of control limits, just that the sample concentrations are low.

RPD as a measure of precision works very well in those cases where the same level of analyte is present in all samples; however, it does not work well as a quantitative tool when varying levels are present. Analysis of sample duplicates is valuable as a quantitative measure of precision but is not useful as a quantitative measure in environmental sample analyses. Another option that is used for evaluating the differences between sample results that are close to the RL is calculating the absolute difference between the results. In this situation, the difference between the sample results is compared to the RL (two times the RL for soils) and if the difference is greater, the sample results are qualified as estimated "J."

Because of these conditions, precision is normally calculated on spike samples, either on a MS and MSD or on a LCS and laboratory control sample duplicate (LCSD). For spike samples, a known concentration of analyte has been added to each sample and evaluations of RPD can be made that are applicable to the reality of the measurement. The drawback is that the precision measurement is only applicable to the particular spike level used.

For the Phase 3 Go-Back, Trench and Soil Vapor Location data set, precision was evaluated by reviewing RPD results for MS/MSDs, LCS/LCSDs, laboratory duplicates, and field duplicates.

Laboratory RPD control limits are presented in the Master FSP (CDM Smith 2012a) or are laboratory specific. For laboratory duplicates, if one or both of the sample results were less than two times the RL, a control limit of the absolute difference value equal to the RL was used for comparison.

The field duplicate RPD criterion is 50 percent. Field duplicates for this project were validated as follows:

- If one result is non-detect and the other result is above the RL, the RPD result is reported at 200 percent and the field duplicate sample and parent sample results are qualified as estimated "J" for a detect value or "UJ" for a non-detect value.
- If the field duplicate RPD is above the 50 percent criterion (and both sample results are above the RL) the field duplicate and parent sample results for that analyte are qualified as estimated "J."

Qualifiers were applied to applicable sample analyte results during the validation process based on laboratory and field duplicate precision results. Details of the validation and the number of analytes qualified are provided in the DUAR and laboratory validation reports in Appendix C.

The following Go-Back, Trench and Soil Vapor Location individual analyte results were qualified as estimated "J/UJ" based on precision criteria:

- Some of the metals due to laboratory precision criteria

Field duplicate precision criteria for Phase 3 Go-Back, Trench and Soil Vapor Location samples required the qualification of some analytes for dioxins, metals, mercury, terphenyls, glycols, PCB/PCTs, herbicides and SVOC SIM. No results were rejected based on field duplicate precision criteria. All field duplicate RPD results are presented in Appendix C. In summary, sample results that have been qualified as estimated "J/UJ" due to precision criteria are usable for project decisions with a degree of caution.

There was no discernible pattern or reason for the identified laboratory and field duplicate sample RPD exceedances. No field sampling issues were identified that would cause the RPD results that were outside of criteria. These exceedances are reasonable for this type of sampling activity.

### 4.7.2 Accuracy

Accuracy is a concept from quantitative analysis that attempts to address the question of how close the analytical result is to the true value of the analyte in the sample. Accuracy is determined through a spike procedure, where a known amount of the target analyte is added to a portion of the sample then the sample and the spiked sample are analyzed. The quantitative measure of accuracy is percent recovery (%R) calculated as follows:

$$\text{Percent Recovery} = \frac{(\text{Total Analyte Found} - \text{Analyte Originally Present})}{\text{Analyte Added}} \times 100$$

Each measurement performed on a sample is subject to random and systematic error. Accuracy is related to the systematic error. Attempts to assess systematic error are always complicated by the inherent random error of the measurement.

Analytical accuracy for the entire data collection activity is difficult to assess because several sources of error exist. Errors can be introduced by any of the following:

- Sampling procedure
- Field contamination
- Sample preservation and handling
- Sample matrix
- Sample preparation
- Analytical techniques

Accuracy is maintained to the extent possible by adhering to the EPA method and approved field and analytical standard operating procedures.

The following QC samples are used to assess laboratory accuracy:

- Matrix Spikes: MSs are samples with a known amount of a target analyte added to them. Analysis of the sample that has been spiked and comparison with the results from the unspiked sample (background) gives information about the ability of the test procedure to generate a correct result from the sample.
- Post Digestion Spikes: Post digestion spikes are performed after the sample has been prepared and is ready for analysis. These are also termed "analytical spikes." The technique is used in

conjunction with a MS to provide data that can separate interferences produced as part of the sample preparation from interferences that are innate qualities of the sample.

- Laboratory Control Samples: LCSs consist of a portion of analyte-free water or solid phase sample that is spiked with target analytes at a known concentration.
- Surrogates: Surrogate recovery is a QC measure limited to use in organics analysis. Surrogates are compounds added to every sample at the beginning of the sample preparation to monitor the success of the sample preparation and analytical procedures on an individual sample basis. Individual compounds used as surrogates are selected based on their ability to mimic the behavior of specific target analytes held to be particularly sensitive to the sample preparation manipulations.
- Interference Check Samples: Interference check sample analysis is a QC measure unique to metals analysis using inductively coupled plasma atomic emission spectrometry. This QC sample verifies the analytical instrument's ability to overcome interferences typical of those found in samples.
- Calibrations: Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for metals. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing calibrations demonstrate that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.
- Internal Standards: Internal standards measure the gas chromatograph/ mass spectrometer sensitivity and response stability during each analysis.
- Serial Dilution: Serial dilutions are performed on at least one sample from every batch of analyses for metals to determine if physical or chemical interferences exist in the analyte determinations.

For the Phase 3 Go-Backs, Trenches and Soil Vapor Location soil data sets, accuracy was evaluated by reviewing the %R values and relative response factors of initial and continuing calibration (percent difference or percent drift [%D] for organic analyses), internal standards, surrogate spikes (organic analyses only), MS/MSD, LCS/LCSD, inductively coupled plasma (ICP) interferences, and by performing serial dilution checks during metals analyses, in conjunction with method blank, calibration blank, equipment rinsate blank, and trip blank results. These QC results assist in identifying the type and magnitude of effects that may have contributed to system error introduced from field and/or laboratory procedures.

Qualifiers were applied to applicable sample results during the validation process based on laboratory accuracy results. Details of the validation and the number of analytes qualified are discussed in the DUAR and laboratory validation reports in Appendix C.

The following Phase 3 Go-Backs, Trenches and Soil Vapor Location individual analyte results were qualified as estimated "J/UJ" based on accuracy criteria:

- Some of the dioxins, PCBs and herbicides due to confirmation column results
- Some of the metal analyte results due to serial dilutions

- Some of the TPH-EFH, TPH-GRO, pesticides, herbicides, VOCs, PCBs, and SVOC SIM results due to calibration results
- Some of the TPH-EFH, TPH-GRO, herbicides, SVOCs, SVOC SIM and energetic results due to LCSs
- Some of the dioxins, metals, glycols, terphenyls, TPH-EFH, TPH-GRO, pesticides, herbicides, VOCs, SVOCs, SVOC SIM and energetic results due to MSs
- Some of the TPH-EFH, TPH-GRO, PCBs and VOC SIM results due to surrogates

The following individual analyte results were rejected "R" based on accuracy criteria:

- One triethylene glycol result, seven herbicide results and one 2,6-dichlorophenol result based on MSs
- Eight herbicide results based on LCSs

Sample preservation, handling, and holding times are additional measures of accuracy of the data. Holding times are defined as the amount of time that elapses from collection of the sample in the field to the start of the analysis. Preservation is defined as techniques used to maintain the target analytes at concentrations representative of the source sampled. Published holding times are viewed as valid as long as the associated preservation and container requirements have been met. All holding times, sample preservation and handling criteria were met except for 16 glycol results. These results were qualified during the validation process.

In summary, sample results that have been qualified as estimated "J/UJ" due to accuracy criteria are usable for project decisions. Results that have been rejected are not usable.

### 4.7.3 Blank Contamination

Blanks are used to determine the level of laboratory and field contamination introduced into the samples, independent of the level of target analytes found in the sample source. Sources of sample contamination can include the containers and equipment used to collect the sample, preservatives added to the sample, other samples in transport coolers and laboratory sample storage refrigerators, standards and solutions used to calibrate instruments, glassware and reagents used to process samples, airborne contamination in the laboratory preparation area and the analytical instrument sample introduction equipment. Each analyte group has its own particular suite of common laboratory contaminants. Active measures must be performed to continually measure the ambient contamination level and steps taken to discover the source of the contamination to eliminate or minimize the levels. Random spot contamination can also occur from analytes that are not common laboratory problems but that can arise as a problem for a specific project or over a short period of time. Sample equipment decontamination practices are discussed in Section 2.5.4. Field blanks, equipment blanks, trip blanks and laboratory method blanks are analyzed to identify possible sources of contamination. The DUAR and laboratory validation reports in Appendix C discuss the results that were qualified based on field and laboratory blank contamination.

In summary, for Go-Backs, Trenches, and Soil Vapor Location samples, some dioxins and metal results in individual samples and batches of samples were qualified as nondetect “U” due to laboratory blank contamination criteria. The percentage of results qualified as nondetect based on laboratory blank contamination was less than 4.7 percent for metals and 44 percent for dioxins.

For the dioxins, method detection limits (MDLs) for this analysis are very low, reported in nanogram per kilogram (ng/kg) or parts per trillion, resulting in numerous results qualified as estimated "J." Many of these estimated values have been subsequently qualified as non-detect "U" because the compound was detected in related laboratory blanks. In the laboratory blanks, low level detections of dioxin analytes are somewhat inevitable because of the nature and universal extent of the compounds. The dioxin levels found in the blanks are well below site-related action levels. Therefore, the resulting qualification of associated sample results as nondetect or "U" does not falsely diminish identification of site-related contaminants.

ASTM International Type II water was used to generate the equipment and field blanks. ASTM International Type II water is not typically certified "clean" to the low RLs established for the low level methods used for Go-Backs, Trenches and Soil Vapor Location sampling.

Tables 4-2 and 4-3 provide a summary of analytes observed in equipment blanks and field blanks. No analytes were detected in the trip blank samples. Eighty-one percent of the detected compounds in the equipment and field blanks were below the RLs but above the MDLs. Compounds detected above the RL are highlighted yellow in the associated tables. Perchlorate was detected above the RL in one of the equipment blanks. Samples associated with this equipment blank either had nondetect concentrations for perchlorate or it was previously determined that site processes did not constitute sampling for perchlorate at the other associated locations. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin was also detected in one of the equipment blank samples at a concentration above the RL. Associated samples either had concentrations of this analyte above the specific analyte validation blank action level or it was previously determined that site processes did not constitute sampling for dioxins at the other associated locations. The concentration of the dioxin analyte detected in the equipment blank could possibly be contributing to the concentrations detected in the samples but not at a level that required qualification based on validation protocol. Other analytes were detected in equipment and/or field blank samples above the RL indicating inherent low level contamination in the source water used. All Phase 3 equipment blanks will continue to be monitored to determine if these low level detections are consistent, thus indicating a possible deficiency in decontamination procedures and/or source water impacts that need to be addressed and corrected.

### 4.7.4 Representativeness, Comparability, and Sensitivity

Representativeness, comparability, and sensitivity are achieved by using EPA-approved sampling procedures and analytical methodologies. By following the procedures described in the Master FSP (CDM Smith 2012a) for this sampling event and future sampling events, sample analysis should yield results representative of environmental conditions at the time of sampling. Similarly, reasonable comparability of analytical results for this and future sampling events can be achieved if approved EPA analytical methods and standardized reporting units are employed.

#### 4.7.4.1 Representativeness

Representativeness is a qualitative term that expresses the degree to which the sample data accurately and precisely represent the environmental conditions corresponding to the location and depth interval of sample collection. Requirements and procedures for sample collection are designed to maximize sample representativeness.

Representativeness also can be monitored by reviewing field documentation and/or performing field audits. For this report, a detailed review was performed on the CoC forms, laboratory sample confirmation logs, and data validation packages. Laboratory QA/QC requirements were included in the

Master FSP (CDM Smith 2012a) and laboratory statements of work (SOWs) to ensure that the laboratory analytical results were representative of true field conditions.

The most significant measure of representativeness is the accuracy of the sampling network and selection of appropriate locations and depths, etc. Field sampling accuracy was attained through adherence to the approved Master FSP (CDM Smith 2012a) for sample location and collection and by using approved standard operating procedures for field data collection. Therefore the data should represent, as near as possible, the actual field conditions at the time of sampling.

Representativeness has been achieved by the performed field work and laboratory analyses. The generated analytical data generated that have not been rejected are viewed to be a representative characterization of the project area.

#### 4.7.4.2 Comparability

Comparability is a qualitative term that expresses the confidence with which a data set can be compared with another. Strict adherence to standard sample collection procedures, analytical detection limits, reporting units and analytical methods assures that data from like samples and sample conditions are comparable. This comparability is independent of laboratory personnel, data reviewers, or sampling personnel. Comparability criteria are met for the project if, based on data review, the sample collection and analytical procedures are determined to have been followed, or defined to show that variations did not affect the values reported.

To ensure comparability of data generated for the site, standard sample collection procedures and DTSC-approved analytical methods were utilized by CDM Smith. The sample analyses were performed by Eurofins Lancaster Laboratory. Utilizing such procedures and methods enables the current data to be comparable with previous and future data sets generated using similar methods.

#### 4.7.4.3 Sensitivity

Sensitivity is related to the ability to compare analytical results with project-specific levels of interest, such as risk-based screening levels or action levels. Analytical detection limits for the various sample analytes should be below the level of interest to allow an effective comparison.

##### *Detection Limits*

The MDL study attempts to answer the question, "What is the lowest level of analyte in a sample that will result in a signal different than zero"? The study is based upon repetitive analysis of an interference-free sample spiked with a known amount of the target analyte. The MDL is a measure of the ability of the test procedure to generate a positive response for the target analyte in the absence of any other interferences from the sample.

The RL is generally defined as the lowest concentration at which an analyte can be detected in a sample and its concentration reported with a reasonable degree of accuracy and precision. For samples that do not pose a particular matrix problem, the RL is typically about three to five times higher than the MDL.

Laboratory results are reported according to rules that provide established certainty of detection and RLs. The result for an analyte is flagged with a "U" if that analyte was not detected, or qualified with a "J" flag if associated QC results fall outside the appropriate tolerance limits. Also, if an analyte is present at a concentration between the MDL and the RL, the analytical result is flagged with a "J,"

indicating an estimated quantity. Qualifying the result as an estimated concentration reflects increased uncertainty in the reported value.

Qualifiers were applied to applicable sample results by the laboratory and identified during the validation process based on sample results being reported as detected below the RL/MDL. Details of the validation and the number of results qualified are discussed in the DUAR and laboratory validation reports in Appendix C.

In summary, for all methods analyzed for Go-Backs, Trenches, and Soil Vapor Locations, results for some of the analytes were qualified as estimated due to RL criteria for dioxins, metals, hexavalent chromium, mercury, TPH-EFH, TPH-GRO, pesticides, PCB/PCTs, herbicides, VOCs, SVOCs, and SVOC SIM. For the data validated in this TM, RLs for a majority of the sample results were low enough to compare to the RL objectives stated in the Master FSP (CDM Smith 2012a). RLs above those stated in the Master FSP (CDM Smith 2012a) will be evaluated on a case by case basis to see if resampling is required.

## 4.8 Dioxin Data Quality and Usability

Dioxins and furans are compounds created as unintended by-products from several human activities as well as from natural causes such as forest fires. They are persistent environmental pollutants and have been shown to bioaccumulate in the environment. One main objective of their analyses is attempting to detect very low concentrations of dioxins and furans. In the attempt to achieve this goal, all dioxin data was analyzed by EPA Method 1613B. The laboratory was directed to report values that were determined to be estimated maximum possible concentrations (EMPC) values. EMPC values are characterized by a response with a signal to noise ratio of at least 2.5:1 for both of the quantitation ions, but do not meet the ion abundance ratio criteria.

An EMPC result indicates that there is the detected presence of a compound above detection level but it does not meet the appropriate QA/QC reporting level criteria to absolutely confirm whether that detected concentration is a dioxin compound identified by the analytical system. What it does indicate is a possible low level dioxin peak has been identified by the analytical instrument but its concentration level is marginally above detection level.

For the Go-Back, Trenches, and Soil Vapor Location dioxin analyses, Eurofins Lancaster Laboratory was directed to qualify any EMPC values with a "Q" qualifier in order to identify EMPC values for future evaluation. In the Appendix A tables, the "Q" qualified data, indicating an EMPC value by the laboratory, has had the qualifier "J-EMPC" added to the final qualifier column to replace the laboratory "Q" qualifier. This is to aid the data user in identifying values that are EMPCs.

Also provided in the tables are description qualifiers that were applied during validation. These are in parenthesis and are only provided to aid the data user in determining why a result was qualified. These qualifiers are not considered final qualifiers and are for informational purposes only.

Because of the nature of dioxins and furans and the objective of achieving very low reporting limits, CDM Smith has identified all EMPC values so individual data users can apply the various options of using EMPC data based on the end users goals and objectives. There is no industry standard guidance on how EMPC values are to be handled. Many EPA regions and states have their own rules when using EMPC values.

Another variable of dioxin analyses is the calculation of a toxicity equivalence (TEQ) for a sample. For a single dioxin compound, the TEQ is the product of the concentration of the dioxin compound in an environmental mixture and its corresponding toxicity equivalence factor (TEF). A TEF for a dioxin compound is a measure of the compound's toxicity relative to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). The total TEQ for the mixture is the sum of the individual TCDD TEQs across the dioxin compounds. The TCDD TEQ provides a means for determining the toxicity of a mixture of dioxin compounds in the absence of toxicity values for these dioxin compounds.

The dioxin data review policy as discussed in the EPA *Contract Laboratory Program National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) Data Review*, Office of Solid Waste and Emergency Response (OSWER) 9240.1-53, EPA-540-R-11-016 (EPA 2011), as well as the 2005 guidelines (EPA 2005), allows individual EPA regions flexibility in using criteria for calculating TEQ and how a data user can use EMPC results in this calculation.

In utilizing EMPC values in TEQ calculations, some data users change the value of the EMPC result to 0 when calculating TEQs. Other data users may use the result as is, not changing it to 0, and others still, will take half of the value.

In summary, in order to allow the data user to have as much information as possible from the analytical process for site data, all EMPC results have been qualified as "J-EMPC" so they can apply their chosen approach in addressing EMPC values in TEQ calculations.

## 4.9 Review of Selected Validation Reports

CDM Smith performed a review of the validation reports identified in Table 4-1. This review involved comparing the validation report results against the laboratory data packages as well as the validation guidance documents. All validation report results were verified against the laboratory data packages and validation guidance documents were followed as required.

## 4.10 Data Completeness

Completeness of the data collection program is defined as the percentage of samples planned for collection as listed in the Master FSP (CDM Smith 2012a) versus the actual number of samples collected during the field program (see equation A).

Completeness for acceptable data is defined as the percentage of acceptable data obtained judged to be valid versus the total quantity of data generated (see equation B). Acceptable data include both data that pass all the QC criteria (unqualified data) and data that may not pass all the QC criteria but had appropriate corrective actions taken (qualified but usable data).

***Equation A.***

$$\%\text{Completeness} = C \times \frac{100}{n}$$

Where:

C = actual number of samples collected
n = total number of samples planned

***Equation B.***

$$\%Completeness = Vx\frac{100}{n'}$$

Where:

V = number of measurements judged valid
n' = total number of measurements made

The overall completeness goal, as defined in the Master FSP (CDM Smith 2012a), for this sampling event is 90 percent for each analytical test for all project data.

A total of 241 soil samples including the field duplicates were collected and analyzed. Some locations required only a subsurface sample while other locations required both a surface and a subsurface sample. The number of subsurface samples to be collected at each location was not pre-determined because the total depth of each boring varies depending on the local geology. The completeness goal for the actual number of samples collected compared to the number of samples planned is considered acceptable as a sample was collected from each location (depending on shallow refusal).

The completeness goal achieved for acceptable data was 99.90 percent for Go-Backs, Trenches, and Soil Vapor Locations for the number of measurements judged to be valid versus the total number of measurements made for all samples analyzed. Table 4-4 summarizes all results that were estimated or rejected for Phase 3 Go-Backs, Trenches, and Soil Vapor Locations respectively.

The following Phase 3 Go-Back, Trenches and Soil Vapor Location individual analyte results were rejected per analyses:

- Method 8015C
  - One out of 32 glycol (triethylene glycol) results (3.12 percent)
- Method 8151A
  - Fifteen out of 140 herbicide results (10.71 percent)
- Method 8270D
  - One out of 619 SVOC (2,6-Cihlorophenol) results (0.16 percent)

**Table 4-4 Summary of Data Completeness Following Data Validation – Go-Backs, Trenches, Soil Vapor Locations**

| | Number of Analyte Detections Without Qualifiers | Number of Estimated Results | Number of Rejected Results | Number of Nondetect Results | Number of Estimated Nondetect Results | Total Analytes Detect and Nondetect | Percent of Analyte Results Judged Valid Versus Total Analyte Results Collected |
|---|---|---|---|---|---|---|---|
| Dioxins – 1613B | 145 | 587 | -- | 917 | 34 | 1,683 | 100 |
| Metals - 6010C | 1,840 | 828 | -- | 437 | 93 | 3,198 | 100 |
| Metals – 6020A | 212 | 229 | -- | 48 | 3 | 492 | 100 |
| Perchlorate - 6850 | -- | -- | -- | 27 | -- | 27 | 100 |
| Hexavalent Chromium – 7199 | 1 | 5 | -- | 6 | -- | 12 | 100 |

**Table 4-4 Summary of Data Completeness Following Data Validation – Go-Backs, Trenches, Soil Vapor Locations**

| | Number of Analyte Detections Without Qualifiers | Number of Estimated Results | Number of Rejected Results | Number of Nondetect Results | Number of Estimated Nondetect Results | Total Analytes Detect and Nondetect | Percent of Analyte Results Judged Valid Versus Total Analyte Results Collected |
|---|---|---|---|---|---|---|---|
| Mercury – 7471B | 43 | 35 | -- | 45 | -- | 123 | 100 |
| Glycols and Terphenyls – 8015B | -- | 2 | -- | 48 | 2 | 52 | 100 |
| Glycols – 8015C | -- | -- | 1 | 16 | 15 | 32 | 96.87 |
| TPH-EFH/GRO – 8015M | 209 | 165 | -- | 837 | 345 | 1,556 | 100 |
| Pesticides – 8081B | 5 | 31 | -- | 577 | 17 | 630 | 100 |
| PCB/PCTs – 8082A | 15 | 31 | -- | 1,513 | 1 | 1,560 | 100 |
| Herbicides – 8151A | 2 | 3 | 15 | 120 | -- | 140 | 89.29 |
| VOCs – 8260B | 1 | 3 | -- | 5,221 | 11 | 5,236 | 100 |
| VOC SIM – 8260B SIM | -- | -- | -- | -- | 1 | 1 | 100 |
| SVOC – 8270D | -- | 19 | 1 | 577 | 22 | 619 | 99.83 |
| SVOC SIM – 8270D SIM | 333 | 420 | -- | 2.370 | 64 | 3,187 | 100 |
| Formaldehyde – 8315A | -- | -- | -- | 6 | -- | 6 | 100 |
| Energetics – 8330A | -- | -- | -- | 208 | 8 | 216 | 100 |
| **Completeness Total for Phase 3 Go-Backs, Trenches and Soil Vapor Location Samples Collected and Judged Valid** | | | | | | | **99.90** |

The completeness goals for both the locations sampled and the number of measurements judged to be valid were met for Phase 3 Go-Backs, Trenches and Soil Vapor Locations.

Sampling deviations from procedures described in the Master FSP (CDM Smith 2012a) are discussed in Section 2.8 of this TM. Deviations did not impact DQOs for this sampling event. The data reported and not rejected are suitable for their intended use for characterization of Area IV of SSFL. The DQIs identified in the Master FSP (CDM Smith 2012a) met appropriate criteria. The achievement of the completeness goals for the data indicates a sufficient amount of usable data has been generated for project decisions.

## 4.11 Assessment of Data Usability and Reconciliation with Master FSP Goals

Over 99 percent of the data validated for Go-Backs, Trenches and Soil Vapor Locations, and reported in this TM, are suitable for their intended use for site characterization. Rejected sample results are not suitable for project use. The rejected analyte results do not impact achievement of the overall project

objectives. The RLs reported generally met the expected limits proposed by the analytical laboratories in their subcontract agreements with CDM Smith.

Sample results that were qualified as estimated are usable for project decisions.

Field duplicate precision also met criteria a majority of the time. RPDs were outside criteria predominantly when the sample results were close to the RL and/or below the project required action limits. Decisions based on results close to the RL should be made with a degree of caution. The achievement of the completeness goals for number of samples collected, and the number of sample results acceptable for use provides sufficient quality data to support project decisions.

# Section 5
# References


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_____. *Technical Memorandum Summary of Phase 3 Trench Investigation Activities in Area IV, Santa Susana Field Laboratory, Ventura County* (MWH, September 2014).

# Appendix A
# Analytical Results Tables

## SSFL Main Qualification Definitions and Notes

**NOTE:** In the Appendix A tables, samples that were analyzed by Lancaster Laboratories are identified with the letter "N" in the sample type code and samples analyzed by EMAX are identified with the word "Split" in the sample type code.

**U –** The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

**J –** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**R –** The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

**UJ –** The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

## SSFL Specific Qualification Definitions

| Qualifier | Organics | Inorganics |
|---|---|---|
| **H** | Holding times were exceeded. | Holding times were exceeded. |
| **S** | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect. |
| **C** | Calibration %RSD, r, r2 or %D were noncompliant | Correlation coefficient is <0.995. |
| **R** | Calibration RRF was <0.05. | %R for calibration is not within control limits |
| **B** | Presumed contamination from preparation (method blank) | Presumed contamination from preparation (method) blank or calibration blank |
| **L** | Laboratory Control Sample/Laboratory Control Sample Duplicate %R was not within control limits | Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits |
| **Q** | MS/MSD recovery was poor; RPD | MS/MSD recovery was poor. |
| **E** | LCS/LCSD RPD | MS/MSD or Duplicate RPD or difference was high. |
| **I** | Internal standard performance was unsatisfactory | ICP ICS results were unsatisfactory. |
| **A** | Not applicable. | ICP Serial Dilution %D were not within control limits |
| **M** | Instrument Performance Check (BFB or DFTPP) was noncompliant | Not applicable. |
| **T** | Presumed contamination from trip blank. | Not applicable. |
| **F** | Presumed contamination from FB or ER. | Presumed contamination from FB or ER. |
| **D** | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| **P** | Instrument performance for pesticides was poor | Post Digestion Spike recovery was not within control limits |
| **K** | EMPC | Not applicable |
| **Z** | Compounds reported below the RL | Analytes reported below the RL and above the MDL |
| ***#** | Unusual problems found with the data that have been described in Section 2, "Data Validation Findings." The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found. | Unusual problems found with the data that have been described in Section 2, "Data Validation Findings." The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found. |

**Appendix A1**
**General Analytical Methods, CAS Number and Chemical Name**
**Go-Backs, Trenches and Soil Vapor Locations**

| Analytical Method | CAS Number | Chemical Name | Alternative Chemical Name |
|---|---|---|---|
| 300 | 14797-55-8 | Nitrate [as N] | |
| 300 | 14797-55-8 | Nitrate | |
| 300 | 16984-48-8 | Fluoride | |
| 9012B | 57-12-5 | Cyanide | |
| 6010B | 7429-90-5 | Aluminum | |
| 6010B | 7439-89-6 | Iron | |
| 6020 | 7439-92-1 | Lead | |
| 6010B | 7439-93-2 | Lithium | |
| 6010B | 7439-95-4 | Magnesium | |
| 6010B | 7439-96-5 | Manganese | |
| 7471A | 7439-97-6 | Mercury | |
| 6020 | 7439-98-7 | Molybdenum | |
| 6020 | 7440-02-0 | Nickel | |
| 6020 | 7440-09-7 | Potassium | |
| 6020 | 7440-22-4 | Silver | |
| 6020 | 7440-23-5 | Sodium | |
| 6020 | 7440-24-6 | Strontium | |
| 6020 | 7440-28-0 | Thallium | |
| 6020 | 7440-31-5 | Tin | |
| 6020 | 7440-32-6 | Titanium | |
| 6020 | 7440-36-0 | Antimony | |
| 6020 | 7440-38-2 | Arsenic | |
| 6020 | 7440-41-7 | Beryllium | |
| 6020 | 7440-39-3 | Barium | |
| 6020 | 7440-42-8 | Boron | |
| 6020 | 7440-43-9 | Cadmium | |
| 6020 | 7440-47-3 | Chromium | |
| 6020 | 7440-48-4 | Cobalt | |
| 6020 | 7440-50-8 | Copper | |
| 6020 | 7440-62-2 | Vanadium | |
| 6020 | 7440-66-6 | Zinc | |
| 6020 | 7440-67-7 | Zirconium | |
| 6020 | 7440-70-2 | Calcium | |
| 6020 | 7723-14-0 | Phosphorus | |
| 6020 | 7782-49-2 | Selenium | |
| 7199 | 18540-29-9 | Chromium (Hexavalent Compounds) | Chromium VI |
| 314 | 14797-73-0 | Perchlorate | |
| 6850 | 14797-73-0 | Perchlorate | |
| 160.3M | MOIST | Percent Moisture | |
| 9045M | pH | pH | |
| 8315A | 60-34-4 | Methylhydrazine | |
| 8315A | 57-14-7 | 1,1-Dimethylhydrazine | |
| 8015B | 64-17-5 | Ethanol | |
| 8015B | 67-56-1 | Methanol | |
| 8015B | 67-63-0 | 2-Propanol | |
| 8015M | 107-21-1 | Ethylene Glycol | |
| 8015M | 111-46-6 | Diethylene Glycol | |
| 8015M | 57-55-6 | Propylene glycol | |
| 8015B | 84-15-1 | o-Terphenyl | |
| 8015B | 92-06-8 | m-Terphenyl | |
| 8015B | 92-94-4 | p-terphenyl | |
| 8315A | 50-00-0 | Formaldehyde | |
| 8330A | 606-20-2 | 2,6-Dinitrotoluene | |
| 8330A | 118-96-7 | 2,4,6-Trinitrotoluene | |
| 8330A | 121-82-4 | 1,3,5-Trinitroperhydro-1,3,5-triazine | RDX |
| 8330A | 19406-51-0 | 4-Amino-2,6-Dinitrotoluene | |
| 8330A | 2691-41-0 | Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine | HMX |
| 8330A | 35572-78-2 | 2-Amino-4,6-Dinitrotoluene | |
| 8330A | 479-45-8 | 2,4,6-Trinitrophenylmethylnitramin | Tetryl |
| 8330A | 55-63-0 | Nitroglycerin | |
| 8330A | 59229-75-3 | 2,6-Diamino-4-nitrotoluene | |

**Appendix A1**
**General Analytical Methods, CAS Number and Chemical Name**
**Go-Backs, Trenches and Soil Vapor Locations**

| Analytical Method | CAS Number | Chemical Name | Alternative Chemical Name |
|---|---|---|---|
| 8330A | 6629-29-4 | 2,4-Diamino-6-nitrotoluene | |
| 8330A | 78-11-5 | Pentaerythritol Tetranitrate | |
| 8330A | 88-72-2 | 2-Nitrotoluene | |
| 8330A | 99-08-1 | 3-Nitrotoluene | |
| 8330A | 99-35-4 | 1,3,5-Trinitrobenzene | |
| 8330A | 99-99-0 | 4-Nitrotoluene | |
| 8330A | 121-14-2 | 2,4-Dinitrotoluene | |
| 8330A | 98-95-3 | Nitrobenzene | |
| 8330A | 99-65-0 | m-Dinitrobenzene | |
| 8151A | 120-36-5 | Dichlorprop | |
| 8151A | 1918-00-9 | Dicamba | |
| 8151A | 75-99-0 | 2,2-Dichlor-Propionic Acid | |
| 8151A | 88-85-7 | Dinitrobutyl Phenol | |
| 8151A | 93-65-2 | Methylchlorophenoxypropionic acid | MCPP |
| 8151A | 93-72-1 | 2,4,5-Trichlorophenoxyacetic acid | Silvex (2,4,5-TP) |
| 8151A | 93-76-5 | 2,4,5-Trichlorophenoxyacetic Acid | 2,4,5-T |
| 8151A | 94-74-6 | 2-Methyl-4-Chlorophenoxyacetic Acid | MCPA |
| 8151A | 94-75-7 | Dichlorophenoxyacetic Acid | 2,4-D |
| 8151A | 94-82-6 | 4-(2,4-dichlorophenoxy)butanoic acid | 2,4 DB |
| 8081A | 8001-35-2 | Chlorinated Camphene | Toxaphene |
| 8081A | 1024-57-3 | Heptachlor Epoxide | |
| 8081A | 1031-07-8 | Endosulfan Sulfate | |
| 8081A | 2385-85-5 | Mirex | |
| 8081A | 309-00-2 | Aldrin | |
| 8081A | 319-84-6 | Alpha-BHC | |
| 8081A | 319-85-7 | Beta-BHC | |
| 8081A | 319-86-8 | Delta-BHC | |
| 8081A | 33213-65-9 | Endosulfan II | |
| 8081A | 50-29-3 | 4,4'-DDT | |
| 8081A | 53494-70-5 | Endrin Ketone | |
| 8081A | 57-74-9 | Chlordane | |
| 8081A | 58-89-9 | Gamma-BHC (Lindane) | |
| 8081A | 60-57-1 | Dieldrin | |
| 8081A | 72-20-8 | Endrin | |
| 8081A | 72-43-5 | Methoxychlor | |
| 8081A | 72-54-8 | 4,4'-DDD | |
| 8081A | 72-55-9 | 4,4'-DDE | |
| 8081A | 7421-93-4 | Endrin Aldehyde | |
| 8081A | 76-44-8 | Heptachlor | |
| 8081A | 959-98-8 | Endosulfan I | |
| 1613B | 1746-01-6 | 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 2,3,7,8-TCDD |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | 1,2,3,7,8,9-HxCDD |
| 1613B | 3268-87-9 | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin | OCDD |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | 1,2,3,4,6,7,8-HpCDD |
| 1613B | 39001-02-0 | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran | OCDF |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | 1,2,3,4,7,8-HxCDD |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | 1,2,3,7,8-PeCDD |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | 2,3,7,8-TCDF |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-Heptachlorodibenzofuran | 1,2,3,4,7,8,9-HpCDF |
| 1613B | 57117-31-4 | 2,3,4,7,8-Pentachlorodibenzofuran | 2,3,4,7,8-PeCDF |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | 1,2,3,7,8-PeCDF |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-Hexachlorodibenzofuran | 1,2,3,6,7,8-HxCDF |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | 1,2,3,6,7,8-HxCDD |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-Hexachlorodibenzofuran | 2,3,4,6,7,8-HxCDF |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-Heptachlorodibenzofuran | 1,2,3,4,6,7,8-HpCDF |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-Hexachlorodibenzofuran | 1,2,3,4,7,8-HxCDF |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-Hexachlorodibenzofuran | 1,2,3,7,8,9-HxCDF |
| 8082 | 11096-82-5 | Aroclor 1260 | |
| 8082 | 11097-69-1 | Aroclor 1254 | |
| 8082 | 11100-14-4 | Aroclor 1268 | |
| 8082 | 11104-28-2 | Aroclor 1221 | |

**Appendix A1**
**General Analytical Methods, CAS Number and Chemical Name**
**Go-Backs, Trenches and Soil Vapor Locations**

| Analytical Method | CAS Number | Chemical Name | Alternative Chemical Name |
|---|---|---|---|
| 8082 | 11126-42-4 | Aroclor 5460 | |
| 8082 | 11141-16-5 | Aroclor 1232 | |
| 8082 | 12642-23-8 | Aroclor 5442 | |
| 8082 | 12672-29-6 | Aroclor 1248 | |
| 8082 | 12674-11-2 | Aroclor 1016 | |
| 8082 | 37324-23-5 | Aroclor 1262 | |
| 8082 | 53469-21-9 | Aroclor 1242 | |
| 8082 | 63496-31-1 | Aroclor 5432 | |
| 1625C | 62-75-9 | N-Nitrosodimethylamine | |
| 8270C SIM | 62-75-9 | N-Nitrosodimethylamine | |
| 8270C | 121-14-2 | 2,4-Dinitrotoluene | |
| 8270C | 98-95-3 | Nitrobenzene | |
| 8270C | 106-46-7 | 1,4-Dichlorobenzene | |
| 8270C | 120-82-1 | 1,2,4-Trichlorobenzene | |
| 8270C | 541-73-1 | 1,3-Dichlorobenzene | |
| 8270C | 87-68-3 | Hexachlorobutadiene | |
| 8270C | 95-50-1 | 1,2-Dichlorobenzene | |
| 8270C | 100-01-6 | 4-Nitroaniline | |
| 8270C | 100-02-7 | 4-Nitrophenol | |
| 8270C | 101-55-3 | 4-Bromophenyl Phenyl Ether | |
| 8270C | 105-67-9 | 2,4-Dimethylphenol | |
| 8270C | 106-44-5 | 4-Methylphenol | |
| 8270C | 106-47-8 | 4-Chloroaniline | |
| 8270C | 108-68-9 | 3,5-Dimethylphenol | |
| 8270C | 108-95-2 | Phenol | |
| 8270C | 111-44-4 | Bis(2-Chloroethyl) ether | |
| 8270C | 111-91-1 | Bis(2-Chloroethoxy) methane | |
| 8270C | 117-81-7 | Bis(2-Ethylhexyl) phthalate | |
| 8270C SIM | 117-81-7 | Bis(2-Ethylhexyl) phthalate | |
| 8270C | 117-84-0 | Di-N-Octyl Phthalate | |
| 8270C SIM | 117-84-0 | Di-N-Octyl Phthalate | |
| 8270C | 118-74-1 | Hexachlorobenzene | |
| 8270C SIM | 120-12-7 | Anthracene | |
| 8270C | 120-83-2 | 2,4-Dichlorophenol | |
| 8270C | 122-66-7 | 1,2-Diphenylhydrazine | |
| 8270C | 129-00-0 | Pyrene | |
| 8270C SIM | 129-00-0 | Pyrene | |
| 8270C | 131-11-3 | Dimethylphthalate | |
| 8270C SIM | 131-11-3 | Dimethylphthalate | |
| 8270C | 132-64-9 | Dibenzofuran | |
| 8270C | 191-24-2 | Benzo(g,h,i)perylene | |
| 8270C SIM | 191-24-2 | Benzo(g,h,i)perylene | |
| 8270C | 193-39-5 | Indeno(1,2,3-Cd)Pyrene | |
| 8270C SIM | 193-39-5 | Indeno(1,2,3-Cd)Pyrene | |
| 8270C | 205-99-2 | Benzo(b)fluoranthene | |
| 8270C SIM | 205-99-2 | Benzo(b)fluoranthene | |
| 8270C | 206-44-0 | Fluoranthene | |
| 8270C SIM | 206-44-0 | Fluoranthene | |
| 8270C | 207-08-9 | Benzo(k)fluoranthene | |
| 8270C SIM | 207-08-9 | Benzo(k)fluoranthene | |
| 8270C SIM | 208-96-8 | Acenaphthylene | |
| 8270C | 218-01-9 | Chrysene | |
| 8270C SIM | 218-01-9 | Chrysene | |
| 8270C | 39638-32-9 | bis(2-Chloroisopropyl) ether | |
| 8270C | 50-32-8 | Benzo(a)pyrene | |
| 8270C SIM | 50-32-8 | Benzo(a)pyrene | |
| 8270C | 51-28-5 | 2,4-Dinitrophenol | |
| 8270C | 534-52-1 | 4,6-Dinitro-2-Methylphenol | |
| 8270C | 53-70-3 | Dibenzo(a,h)anthracene | |
| 8270C SIM | 53-70-3 | Dibenzo(a,h)anthracene | |
| 8270C | 56-55-3 | Benzo(a)anthracene | |

**Appendix A1**
**General Analytical Methods, CAS Number and Chemical Name**
**Go-Backs, Trenches and Soil Vapor Locations**

| Analytical Method | CAS Number | Chemical Name | Alternative Chemical Name |
|---|---|---|---|
| 8270C SIM | 56-55-3 | Benzo(a)anthracene | |
| 8270C | 59-50-7 | 4-Chloro-3-Methylphenol | |
| 8270C | 621-64-7 | N-Nitroso-Di-N-Propylamine | |
| 8270C | 62-53-3 | Aniline | |
| 8270C | 65-85-0 | Benzoic Acid | |
| 8270C | 67-72-1 | Hexachloroethane | |
| 8270C | 7005-72-3 | 4-Chlorophenyl Phenylether | |
| 8270C | 77-47-4 | Hexachlorocyclopentadiene | |
| 8270C | 78-59-1 | Isophorone | |
| 8270C SIM | 83-32-9 | Acenaphthene | |
| 8270C | 84-66-2 | Diethylphthalate | |
| 8270C SIM | 84-66-2 | Diethylphthalate | |
| 8270C | 84-74-2 | Di-N-Butylphthalate | |
| 8270C SIM | 84-74-2 | Di-N-Butylphthalate | |
| 8270C | 85-01-8 | Phenanthrene | |
| 8270C SIM | 85-01-8 | Phenanthrene | |
| 8270C | 85-68-7 | Butylbenzylphthalate | |
| 8270C SIM | 85-68-7 | Butylbenzylphthalate | |
| 8270C | 86-30-6 | N-Nitrosodiphenylamine | |
| 8270C SIM | 86-73-7 | Fluorene | |
| 8270C | 86-74-8 | Carbazole | |
| 8270C | 87-86-5 | Pentachlorophenol | |
| 8270C | 88-06-2 | 2,4,6-Trichlorophenol | |
| 8270C | 88-74-4 | 2-Nitroaniline | |
| 8270C | 88-75-5 | 2-Nitrophenol | |
| 8270C | 90-12-0 | 1-Methylnaphthalene | |
| 8270C SIM | 90-12-0 | 1-Methylnaphthalene | |
| 8270C | 91-20-3 | Naphthalene | |
| 8270C SIM | 91-20-3 | Naphthalene | |
| 8270C | 91-57-6 | 2-Methylnaphthalene | |
| 8270C SIM | 91-57-6 | 2-Methylnaphthalene | |
| 8270C | 91-58-7 | 2-Chloronaphthalene | |
| 8270C | 91-94-1 | 3,3`-Dichlorobenzidine | |
| 8270C | 92-87-5 | Benzidine | |
| 8270C | 95-48-7 | 2-Methylphenol | |
| 8270C | 95-57-8 | 2-Chlorophenol | |
| 8270C | 95-95-4 | 2,4,5-Trichlorophenol | |
| 8270C | 99-09-2 | 3-Nitroaniline | |
| 8270C | 100-51-6 | Benzyl Alcohol | |
| 8270C | 606-20-2 | 2,6-Dinitrotoluene | |
| 8015B | GROC5C12 | Gasoline Range Organices (C5-C12) | GRO (C5-C12) |
| 8015B | PHCC15C20 | Extractable Fuel Hydrocarbons (C15-C20) | EFH (C15-C20) |
| 8015B | PHCC21C30 | Extractable Fuel Hydrocarbons (C21-C30) | EFH (C21-C30) |
| 8015B | PHCC30C40 | Extractable Fuel Hydrocarbons (C30-C40) | EFH (C30-C40) |
| 8015B | PHCC8C11 | Extractable Fuel Hydrocarbons (C8-C11) | EFH (C8-C11) |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | |
| 8260B | 87-68-3 | Hexachlorobutadiene | |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | |
| 8260B | 99-87-6 | Isopropyltoluene | |
| 8260B | 100-41-4 | Ethylbenzene | |
| 8260B | 100-42-5 | Styrene | |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | |
| 8260B | 103-65-1 | N-Propylbenzene | |
| 8260B | 104-51-8 | N-Butylbenzene | |
| 8260B | 106-43-4 | 4-Chlorotoluene | |
| 8260B | 106-93-4 | 1,2-Dibromoethane | |
| 8260B | 107-06-2 | 1,2-Dichloroethane | |
| 8260B | 108-10-1 | 4-Methyl-2-Pentanone | |

**Appendix A1**
**General Analytical Methods, CAS Number and Chemical Name**
**Go-Backs, Trenches and Soil Vapor Locations**

| Analytical Method | CAS Number | Chemical Name | Alternative Chemical Name |
|---|---|---|---|
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | |
| 8260B | 108-86-1 | Bromobenzene | |
| 8260B | 108-88-3 | Toluene | |
| 8260B | 108-90-7 | Chlorobenzene | |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | |
| 8260B SIM | 123-91-1 | 1,4-Dioxane | |
| 8260B | 124-48-1 | Dibromochloromethane | |
| 8260B | 127-18-4 | Tetrachloroethene | |
| 8260B | 135-98-8 | sec-Butylbenzene | |
| 8260B | 142-28-9 | 1,3-Dichloropropane | |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | |
| 8260B | 1634-04-4 | Methyl tert-Butyl Ether | |
| 8260B | 179601-23-1 | m,p-Xylene | |
| 8260B | 56-23-5 | Carbon tetrachloride | |
| 8260B | 563-58-6 | 1,1-Dichloropropene | |
| 8260B | 591-78-6 | 2-Hexanone | |
| 8260B | 594-20-7 | 2,2-Dichloropropane | |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | |
| 8260B | 67-64-1 | Acetone | |
| 8260B | 67-66-3 | Chloroform | |
| 8260B | 71-43-2 | Benzene | |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | |
| 8260B | 74-83-9 | Bromomethane | |
| 8260B | 74-87-3 | Chloromethane | |
| 8260B | 74-95-3 | Dibromomethane | |
| 8260B | 74-97-5 | Bromochloromethane | |
| 8260B | 75-00-3 | Chloroethane | |
| 8260B | 75-01-4 | Vinyl Chloride | |
| 8260B | 75-09-2 | Methylene chloride | |
| 8260B | 75-25-2 | Bromoform | |
| 8260B | 75-27-4 | Bromodichloromethane | |
| 8260B | 75-34-3 | 1,1-Dichloroethane | |
| 8260B | 75-35-4 | 1,1-Dichloroethene | |
| 8260B | 75-69-4 | Trichlorofluoromethane | |
| 8260B | 75-71-8 | Dichlorodifluoromethane | |
| 8260B | 75-88-7 | 1,1,1-Trichloro-2,2,2-trifluoroethane | Freon 113a |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | Freon 113 |
| 8260B | 78-87-5 | 1,2-Dichloropropane | |
| 8260B | 78-93-3 | 2-Butanone | |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | |
| 8260B | 79-01-6 | Trichloroethene | |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | |
| 8260B | 79-38-9 | Chlorotrifluoroethene | |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | |
| 8260B | 95-47-6 | o-Xylene | |
| 8260B | 95-49-8 | 2-Chlorotoluene | |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | |
| 8260B | 98-06-6 | tert-Butylbenzene | |
| 8260B | 98-82-8 | Isopropylbenzene | |

| | | | | | |
|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-1175-SA5A-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 |
| | | | Sample Type | FD | N |
| | | | Sample Date | 06/16/2014 | 06/16/2014 |
| | | | SDG | PH234 | PH234 |
| | | | Start Depth | 2 | 2 |
| | | | End Depth | 3 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | |
| 8260B SIM | 123-91-1 | 1,4-Dioxane | µg/kg | 15 UJ S | 16 UJ S |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | | FDG2-SL-559-NBZ-SB-0.0-0.5 | | FDG2-SL-562-NBZ-SB-0.0-0.5 | | FDG2-SL-563-NBZ-SB-0.0-0.5 | | FDG2-SL-584-SA5D-SB-0.0-0.5 | | FDG2-SL-585-SA5D-SB-0.0-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 06/09/2014 | | 06/09/2014 | | 06/12/2014 | | 06/12/2014 | | 05/21/2014 | | 05/21/2014 | |
| | | | SDG | PH224 | | PH224 | | PH231 | | PH231 | | PH193 | | PH193 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1 | UJ (FD) | 1.01 | U | 1.2 | U | 1.01 | U | 1.02 | U | 1.06 | UJ (FD) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.248 | J-EMPC J (FD, Z) | 0.18 | J-EMPC J (Z) | 0.149 | J-EMPC J (Z) | 0.305 | J (Z) | 17.5 | | 3.64 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 50.1 | | 24.5 | | 71.3 | | 150 | | 8880 | J (*#) | 1670 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.59 | | 2.77 | J (Z) | 8.17 | | 17.9 | | 936 | | 144 | J (Q) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 2.14 | J (FD, Z) | 10.1 | J-EMPC U (B) | 4.5 | J (Z) | 8.22 | J (Z) | 289 | | 50 | J (FD, Q) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.164 | J-EMPC J (Z) | 5.05 | J-EMPC U (B) | 0.129 | J (Z) | 0.147 | J-EMPC J (Z) | 7.75 | | 1.51 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5 | UJ (FD) | 5.05 | U (B) | 6 | U | 0.128 | J-EMPC J (Z) | 4.35 | J (Z) | 0.99 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.192 | J-EMPC J (Z) | 0.0786 | J-EMPC J (Z) | 1.2 | J-EMPC U (B) | 1.01 | J-EMPC U (B) | 1.64 | | 0.835 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5 | U (B) | 5.05 | U (B) | 6 | J-EMPC U (B) | 0.393 | J-EMPC J (Z) | 19.3 | | 1.95 | J (FD, Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5 | U (B) | 5.05 | J-EMPC U (B) | 6 | J-EMPC U (B) | 5.07 | U (B) | 1.79 | J (Z) | 1.02 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5 | U (B) | 5.05 | U (B) | 6 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 4.19 | J (Z) | 1.73 | J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5 | J-EMPC UJ (B, FD) | 5.05 | U (B) | 0.167 | J (Z) | 0.194 | J (Z) | 5.11 | | 0.955 | J (FD, Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.359 | J (Z) | 5.05 | U (B) | 0.399 | J (Z) | 0.747 | J (Z) | 40.2 | | 6.21 | |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5 | UJ (B, FD) | 5.05 | J-EMPC U (B) | 6 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 7.64 | | 1.24 | J (FD, Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 1.05 | J (Z) | 0.558 | J (Z) | 1.86 | J (Z) | 3.47 | J (Z) | 114 | | 17.1 | J (FD) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5 | J-EMPC U (B) | 5.05 | J-EMPC U (B) | 0.1 | J-EMPC J (Z) | 0.143 | J (Z) | 4.34 | J (Z) | 0.95 | J (FD, Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5 | U (B) | 5.05 | J-EMPC U (B) | 0.0682 | J-EMPC J (Z) | 0.0742 | J-EMPC J (Z) | 1.62 | J (Z) | 0.762 | J (Z) |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-586-SA5D-SB-0.0-0.5 | | FDG2-SL-858-NBZ-SB-0.0-0.5 | | FDG2-SL-874-SA5A-SB-0.0-0.5 | | FDG2-SL-875-SA5A-SB-0.0-0.5 | | FDG2-SL-885-SA5D-SB-0.0-0.5 | | FDG-SL-1049-SA5C-SB-0.0-0.5 | |
| | | | Sample Type | N | | FD | | N | | N | | FD | | FD | |
| | | | Sample Date | 05/21/2014 | | 06/09/2014 | | 05/20/2014 | | 06/16/2014 | | 05/21/2014 | | 05/08/2014 | |
| | | | SDG | PH193 | | PH224 | | PH188 | | PH234 | | PH193 | | PH173 | |
| | | | Start Depth | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | End Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.01 | U (B) | 0.0957 | J-EMPC J (FD, Z) | 0.149 | J-EMPC J (Z) | 0.997 | U (B) | 1.02 | J-EMPC UJ (B, FD) | 1.04 | UJ (FD) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.52 | J (Z) | 0.448 | J-EMPC J (FD, Z) | 5.21 | U | 1.16 | J (Z) | 4.3 | J (Z) | 0.567 | J (FD, Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 39.2 | | 70.2 | | 10.4 | U (B) | 738 | | 2050 | | 161 | J (FD) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 2.59 | J (Z) | 8.57 | | 5.21 | J-EMPC U (B) | 38.9 | | 197 | | 24.2 | J (FD) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 1.34 | J (Z) | 3.67 | J (FD, Z) | 10.4 | U (B) | 14.6 | | 104 | J (FD) | 6.53 | J (FD, Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.05 | U (B) | 0.255 | J-EMPC J (Z) | 5.21 | U | 0.464 | J-EMPC J (Z) | 2.1 | J (Z) | 0.202 | J (FD, Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.314 | J (Z) | 0.297 | J-EMPC J (FD, Z) | 5.21 | J-EMPC U (B) | 0.324 | J (Z) | 1.11 | J (Z) | 5.22 | UJ (B, FD) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0941 | J (Z) | 0.135 | J (Z) | 1.04 | U | 0.138 | J-EMPC J (Z) | 0.69 | J (Z) | 1.04 | UJ (FD) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.05 | U (B) | 4.92 | U (B) | 5.21 | U | 0.386 | J (Z) | 3.43 | J (FD, Z) | 0.483 | J (FD, Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.05 | U (B) | 4.92 | J-EMPC U (B) | 5.21 | U | 0.406 | J (Z) | 1.15 | J (Z) | 0.241 | J (FD, Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.531 | J (Z) | 4.92 | J-EMPC U (B) | 5.21 | J-EMPC U (B) | 0.398 | J (Z) | 1.81 | J (Z) | 5.22 | J-EMPC UJ (B, FD) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.05 | U (B) | 4.92 | UJ (B, FD) | 5.21 | U | 0.298 | J-EMPC J (Z) | 1.64 | J (FD, Z) | 0.272 | J-EMPC J (FD, Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.15 | J (Z) | 0.442 | J-EMPC J (Z) | 5.21 | U (B) | 1.57 | J (Z) | 8.66 | | 0.758 | J (FD, Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.05 | U (B) | 4.92 | UJ (B, FD) | 5.21 | U | 0.373 | J-EMPC J (Z) | 2.15 | J (FD, Z) | 0.363 | J-EMPC J (FD, Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.439 | J (Z) | 1.69 | J (Z) | 5.21 | J-EMPC U (B) | 4.51 | J (Z) | 32.8 | J (FD) | 2.75 | J (FD, Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.107 | J (Z) | 4.92 | J-EMPC U (B) | 5.21 | J-EMPC U (B) | 0.424 | J (Z) | 1.95 | J (FD, Z) | 0.133 | J (FD, Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 1.88 | J (Z) | 4.92 | U (B) | 5.21 | U (B) | 0.331 | J (Z) | 1.04 | J (Z) | 5.22 | J-EMPC UJ (B, FD) |

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(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | | FDG-SL-511-SA5C-SB-0.0-0.5 | | FDG-SL-748-SA5C-SB-0.0-0.5 | | FDG-SL-749-SA5C-SB-0.0-0.5 | | FDG-SL-757-SA5C-SB-0.0-0.5 | | FDG-SL-798-SA5B-SB-0.0-0.5 | | FDG-SL-841-SA5B-SB-0.0-0.5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | | N | | N | | N | | N | | N | | N | |
| | | | | Sample Date | | 05/08/2014 | | 05/12/2014 | | 05/08/2014 | | 05/14/2014 | | 05/07/2014 | | 05/14/2014 | |
| | | | | SDG | | PH173 | | PH175 | | PH173 | | PH177 | | PH172 | | PH177 | |
| | | | | Start Depth | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| | | | | End Depth | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.52 | | 0.193 | J-EMPC J (Z) | 1.04 | UJ (B, FD) | 0.108 | J-EMPC J (Z) | 0.173 | J (Z) | 0.999 | U | | |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 52.2 | | 2.31 | J (Z) | 8.42 | J (FD) | 2.26 | J (Z) | 18.6 | | 0.17 | J-EMPC J (Z) | | |
| 1613B | 3268-87-9 | OCDD | ng/kg | 26100 | J (*#) | 607 | | 3460 | J (FD) | 1650 | | 9400 | J (*#) | 10.5 | | | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 2670 | J (*#) | 56.8 | | 572 | J (FD) | 133 | | 891 | | 0.938 | J (Z) | | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 584 | | 15.3 | | 66.6 | J (FD, Q) | 54.3 | | 337 | | 0.878 | J-EMPC J (Z) | | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 26 | | 1.03 | J (Z) | 3.04 | J (FD, Z) | 1.24 | J (Z) | 8.61 | | 4.99 | U | | |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 11.8 | | 0.708 | J-EMPC J (Z) | 1.87 | J (FD, Z) | 0.716 | J (Z) | 4.3 | J-EMPC J (Z) | 4.99 | U | | |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.63 | J (Z) | 0.801 | J (Z) | 0.15 | J-EMPC J (FD, Z) | 1.01 | U | 1.32 | | 0.0638 | J-EMPC J (Z) | | |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 25.5 | | 0.581 | J-EMPC J (Z) | 2.47 | J (FD, Z) | 1.21 | J (Z) | 7.7 | | 0.0876 | J-EMPC J (Z) | | |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 3.07 | J (Z) | 0.439 | J (Z) | 0.46 | J-EMPC J (FD, Z) | 0.397 | J (Z) | 2.16 | J (Z) | 0.11 | J-EMPC J (Z) | | |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 1.75 | J (Z) | 0.873 | J (Z) | 0.388 | J-EMPC J (FD, Z) | 0.315 | J (Z) | 4.15 | J (Z) | 2.47 | J (Z) | | |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 10.1 | | 0.684 | J (Z) | 1.11 | J-EMPC J (FD, Z) | 0.635 | J (Z) | 3.98 | J (Z) | 0.0375 | J-EMPC J (Z) | | |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 126 | | 2.44 | J (Z) | 22.1 | J (FD) | 3.76 | J (Z) | 35.3 | | 0.0953 | J-EMPC J (Z) | | |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 21.7 | | 0.451 | J-EMPC J (Z) | 1.84 | J (FD, Z) | 0.867 | J (Z) | 6.01 | | 0.0626 | J-EMPC J (Z) | | |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 282 | | 6.2 | | 29.6 | J (FD, Q) | 18.9 | | 114 | | 0.33 | J (Z) | | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 6.99 | | 0.591 | J (Z) | 0.945 | J (FD, Z) | 0.768 | J (Z) | 3.56 | J (Z) | 0.132 | J-EMPC J (Z) | | |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.3 | U | 0.32 | J-EMPC J (Z) | 5.2 | J-EMPC UJ (B, FD) | 0.376 | J (Z) | 4.9 | U | 0.104 | J (Z) | | |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Name | | FDG-SL-842-SA5B-SB-0.0-0.5 | | SL-838-SA5B-SB-0.0-0.5 | | SL-839-SA5B-SB-0.0-0.5 | | SL-840-SA5B-SB-0.0-0.5 | | SL-843-SA5B-SB-0.0-0.5 | | SL-503-SA5C-TR-0.5 | |
| | | Sample Type | | N | | N | | N | | N | | N | | N | |
| | | Sample Date | | 05/14/2014 | | 01/13/2014 | | 01/14/2014 | | 01/13/2014 | | 01/14/2014 | | 05/29/2014 | |
| | | SDG | | PH177 | | PH158 | | PH159 | | PH158 | | PH159 | | PH207 | |
| | | Start Depth | | 0 | | 0 | | 0 | | 0 | | 0 | | 0.5 | |
| | | End Depth | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.998 | U | 1.01 | U | 1.04 | U | 1.03 | J-EMPC U (B) | 0.0867 | J-EMPC J (Z) | 0.189 | J-EMPC J (Z) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 3.56 | J (Z) | 5.06 | U (B) | 0.261 | J (Z) | 0.391 | J (Z) | 1.01 | J (Z) | 4.88 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 1330 | | 4.59 | J (Z) | 4.52 | J (Z) | 36.4 | | 15 | | 2540 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 115 | | 5.06 | U (B) | 5.18 | J-EMPC U (B) | 2.84 | J (Z) | 2.08 | J (Z) | 119 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 89.9 | | 10.1 | J-EMPC U (B) | 10.4 | U (B) | 1.4 | J (Z) | 11 | U (B) | 24.6 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.67 | J (Z) | 5.06 | J-EMPC U (B) | 5.18 | U | 5.17 | J-EMPC U (B) | 5.49 | J-EMPC U (B) | 2.07 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.657 | J (Z) | 0.189 | J (Z) | 0.0469 | J-EMPC J (Z) | 0.0435 | J-EMPC J (Z) | 0.242 | J-EMPC J (Z) | 1.48 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.088 | J-EMPC J (Z) | 0.131 | J-EMPC J (Z) | 1.04 | U | 1.03 | U | 0.134 | J-EMPC J (Z) | 1.02 | J-EMPC U (B) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 2.8 | J (Z) | 5.06 | U (B) | 5.18 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.49 | U (B) | 5.12 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.167 | J-EMPC J (Z) | 5.06 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.49 | J-EMPC U (B) | 5.12 | U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 4.99 | J-EMPC U (B) | 5.06 | U (B) | 5.18 | J-EMPC U (B) | 5.17 | U | 0.332 | J-EMPC J (Z) | 0.379 | J-EMPC J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 2.43 | J (Z) | 5.06 | U (B) | 5.18 | J-EMPC U (B) | 5.17 | U (B) | 5.49 | J-EMPC U (B) | 0.332 | J-EMPC J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 3.04 | J (Z) | 0.23 | J-EMPC J (Z) | 5.18 | J-EMPC U (B) | 0.321 | J-EMPC J (Z) | 0.665 | J (Z) | 4.94 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 2.18 | J (Z) | 5.06 | U (B) | 5.18 | U (B) | 5.17 | J-EMPC U (B) | 5.49 | J-EMPC U (B) | 5.12 | U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 35.7 | | 5.06 | U (B) | 5.18 | J-EMPC U (B) | 0.537 | J (Z) | 0.449 | J (Z) | 7.57 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 1.26 | J (Z) | 5.06 | U (B) | 5.18 | J-EMPC U (B) | 5.17 | U (B) | 0.177 | J (Z) | 0.481 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.253 | J-EMPC J (Z) | 5.06 | J-EMPC U (B) | 5.18 | U (B) | 0.293 | J (Z) | 0.717 | J-EMPC J (Z) | 0.474 | J (Z) |

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(Z, etc.) – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-529-SA5B-TR-0.5 | | SL-534-SA8-TR-0.5 | | SL-548-SA8-TR-0.5 | | SL-569-SA6-TR-0.5 | | SL-570-SA6-TR-0.5 | | SL-587-SA5A-TR-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 05/28/2014 | | 05/19/2014 | | 05/19/2014 | | 05/20/2014 | | 05/20/2014 | | 05/22/2014 | |
| | | | SDG | PH204 | | PH185 | | PH185 | | PH189 | | PH189 | | PH195 | |
| | | | Start Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| | | | End Depth | | | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.04 | U | 1.04 | U | 1.07 | U | 1.01 | U | 1.02 | U | 1 | J-EMPC U (B) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.969 | J (Z) | 5.18 | J-EMPC U (B) | 0.317 | J (Z) | 0.212 | J-EMPC J (Z) | 0.507 | J-EMPC J (Z) | 0.488 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 347 | | 8.27 | J (Z) | 20.7 | | 28.6 | | 118 | | 115 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 26.2 | | 1.13 | J (Z) | 2.59 | J (Z) | 1.77 | J (Z) | 6.34 | | 8.39 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 8.53 | J (Z) | 10.4 | J-EMPC U (B) | 0.941 | J (Z) | 0.51 | J-EMPC J (Z) | 1.71 | J (Z) | 2.24 | J (Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.2 | J-EMPC U (B) | 0.0451 | J-EMPC J (Z) | 0.0438 | J-EMPC J (Z) | 0.0631 | J-EMPC J (Z) | 0.188 | J (Z) | 5.02 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.2 | U (B) | 0.0374 | J-EMPC J (Z) | 0.0253 | J-EMPC J (Z) | 5.06 | J-EMPC U (B) | 5.1 | U (B) | 5.02 | U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0494 | J-EMPC J (Z) | 0.0798 | J (Z) | 0.0392 | J (Z) | 1.01 | U | 0.07 | J-EMPC J (Z) | 1 | J-EMPC U (B) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.2 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.37 | J-EMPC U (B) | 5.06 | U | 5.1 | U | 5.02 | U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.2 | U (B) | 5.18 | U | 5.37 | J-EMPC U (B) | 5.06 | J-EMPC U (B) | 5.1 | J-EMPC U (B) | 5.02 | U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.2 | J-EMPC U (B) | 0.223 | J-EMPC J (Z) | 5.37 | U (B) | 5.06 | J-EMPC U (B) | 5.1 | U (B) | 5.02 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.279 | J-EMPC J (Z) | 5.18 | J-EMPC U (B) | 5.37 | J-EMPC U (B) | 5.06 | J-EMPC U (B) | 5.1 | U (B) | 5.02 | U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.943 | J (Z) | 0.14 | J-EMPC J (Z) | 0.23 | J-EMPC J (Z) | 5.06 | J-EMPC U (B) | 0.313 | J-EMPC J (Z) | 0.431 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.2 | U (B) | 5.18 | U (B) | 5.37 | J-EMPC U (B) | 5.06 | J-EMPC U (B) | 5.1 | J-EMPC U (B) | 5.02 | U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 3.45 | J (Z) | 0.244 | J (Z) | 0.352 | J (Z) | 5.06 | U (B) | 0.511 | J (Z) | 1.03 | J (Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.2 | U (B) | 5.18 | U (B) | 5.37 | J-EMPC U (B) | 5.06 | J-EMPC U (B) | 5.1 | J-EMPC U (B) | 5.02 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.2 | J-EMPC U (B) | 5.18 | U (B) | 0.272 | J (Z) | 5.06 | J-EMPC U (B) | 5.1 | U (B) | 5.02 | J-EMPC U (B) |

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J – Result is an estimated value
R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-605-SA5C-TR-0.5 | | SL-611-SA8-TR-0.5 | | SL-636-SA5A-TR-0.5 | | SL-646-SA5C-TR-0.5 | | SL-651-SA5C-TR-0.5 | | SL-653-SA5C-TR-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 05/29/2014 | | 05/20/2014 | | 05/23/2014 | | 06/04/2014 | | 05/30/2014 | | 06/02/2014 | |
| | | | SDG | PH207 | | PH189 | | PH199 | | PH217 | | PH209 | | PH212 | |
| | | | Start Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| | | | End Depth | | | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.06 | U | 1.07 | U | 0.99 | U | 0.997 | U | 1.03 | U | 0.974 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.31 | U (B) | 0.182 | J-EMPC J (Z) | 4.95 | U (B) | 0.125 | J-EMPC J (Z) | 0.518 | J-EMPC J (Z) | 0.0806 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 140 | | 29.3 | | 39.1 | | 31.9 | | 83.9 | | 10.2 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 10.2 | | 2.98 | J (Z) | 3.52 | J (Z) | 3.24 | J (Z) | 7.89 | | 1.12 | J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 4.4 | J (Z) | 1.51 | J-EMPC J (Z) | 1.56 | J (Z) | 1.26 | J-EMPC J (Z) | 2.88 | J (Z) | 9.74 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.31 | U (B) | 0.0787 | J-EMPC J (Z) | 4.95 | J-EMPC U (B) | 0.0387 | J-EMPC J (Z) | 5.17 | J-EMPC U (B) | 4.87 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.31 | U | 5.34 | U | 4.95 | J-EMPC U (B) | 4.98 | U | 5.17 | J-EMPC U (B) | 4.87 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.06 | U | 1.21 | | 0.99 | U | 0.0959 | J-EMPC J (Z) | 0.129 | J-EMPC J (Z) | 0.0958 | J-EMPC J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.31 | J-EMPC U (B) | 5.34 | J-EMPC U (B) | 4.95 | U (B) | 4.98 | U (B) | 5.17 | J-EMPC U (B) | 4.87 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.31 | J-EMPC U (B) | 0.958 | J-EMPC J (Z) | 4.95 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.17 | U (B) | 4.87 | U |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 2.63 | J (Z) | 14.8 | | 3.08 | J (Z) | 4.98 | U (B) | 5.17 | U (B) | 4.87 | J-EMPC U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.54 | J (Z) | 1.16 | J (Z) | 4.95 | J-EMPC U (B) | 4.98 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 0.043 | J-EMPC J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.256 | J (Z) | 0.214 | J-EMPC J (Z) | 4.95 | J-EMPC U (B) | 4.98 | U (B) | 0.552 | J (Z) | 4.87 | J-EMPC U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.31 | U (B) | 0.415 | J (Z) | 4.95 | U (B) | 4.98 | U (B) | 5.17 | U (B) | 0.0708 | J-EMPC J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 1.66 | J (Z) | 0.792 | J-EMPC J (Z) | 0.686 | J (Z) | 0.602 | J (Z) | 1.13 | J (Z) | 4.87 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.31 | U (B) | 5.34 | U (B) | 4.95 | U (B) | 4.98 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 4.87 | J-EMPC U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.31 | J-EMPC U (B) | 5.34 | U | 4.95 | U (B) | 4.98 | J-EMPC U (B) | 0.448 | J-EMPC J (Z) | 4.87 | U |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-655-SA5C-TR-0.5 | | SL-686-SA6-TR-0.5 | | SL-693-SA5B-TR-0.5 | | SL-699-SA5B-TR-0.5 | | SL-707-SA5B-TR-0.5 | | SL-730-SA5A-TR-0.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 06/04/2014 | | 05/21/2014 | | 05/27/2014 | | 05/28/2014 | | 05/27/2014 | | 05/22/2014 | |
| | | | SDG | PH217 | | PH192 | | PH201 | | PH204 | | PH201 | | PH195 | |
| | | | Start Depth | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | 0.5 | |
| | | | End Depth | | | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0903 | J (Z) | 0.424 | J (Z) | 0.991 | U | 0.999 | J-EMPC U (B) | 0.179 | J (Z) | 1.99 | |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.32 | J-EMPC J (Z) | 14.7 | | 0.665 | J (Z) | 0.998 | J (Z) | 6.81 | | 2.33 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 11.2 | | 8840 | | 120 | | 576 | | 3060 | | 1050 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 1.27 | J-EMPC J (Z) | 409 | | 10.7 | | 35.6 | | 329 | | 90.2 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 0.496 | J (Z) | 83.2 | | 5.75 | J (Z) | 12.1 | | 250 | | 68.2 | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.0708 | J-EMPC J (Z) | 7 | | 4.95 | U (B) | 0.36 | J (Z) | 3.45 | J (Z) | 1.21 | J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.08 | U (B) | 4.34 | J (Z) | 0.126 | J-EMPC J (Z) | 4.99 | J-EMPC U (B) | 1.88 | J (Z) | 0.885 | J (Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0773 | J (Z) | 1.49 | | 0.991 | U | 0.162 | J-EMPC J (Z) | 0.101 | J-EMPC J (Z) | 0.863 | J (Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.08 | U (B) | 1.28 | J (Z) | 4.95 | U (B) | 4.99 | U (B) | 3.83 | J (Z) | 2.29 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.08 | U (B) | 1.44 | J (Z) | 0.0787 | J-EMPC J (Z) | 4.99 | U (B) | 0.58 | J-EMPC J (Z) | 1.37 | J (Z) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.08 | U (B) | 1.77 | J (Z) | 0.243 | J (Z) | 0.891 | J (Z) | 0.381 | J (Z) | 1.95 | J-EMPC J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.08 | J-EMPC U (B) | 0.938 | J (Z) | 0.19 | J (Z) | 0.517 | J-EMPC J (Z) | 1.66 | J (Z) | 1.55 | J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.214 | J-EMPC J (Z) | 15.2 | | 0.572 | J-EMPC J (Z) | 1.53 | J (Z) | 10.3 | | 3.68 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.08 | J-EMPC U (B) | 1.25 | J (Z) | 0.157 | J-EMPC J (Z) | 0.475 | J (Z) | 2.32 | J (Z) | 1.63 | J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.08 | J-EMPC U (B) | 23.9 | | 2.17 | J (Z) | 5.6 | | 70.4 | | 23.4 | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.08 | U (B) | 1.56 | J (Z) | 4.95 | J-EMPC U (B) | 4.99 | U (B) | 2.09 | J (Z) | 1.34 | J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.08 | U (B) | 0.698 | J (Z) | 0.45 | J-EMPC J (Z) | 0.982 | J (Z) | 0.839 | J (Z) | 0.692 | J (Z) |

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Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-1175-SA5A-SB-2.0-3.0 | | FDG2-SL-586-SA5D-SB-2.0-3.0 | | FDG2-SL-875-SA5A-SB-2.0-3.0 | | FDG-SL-511-SA5C-SB-2.0-3.0 | | SL-529-SA5B-TR-2.0 | | SL-570-SA6-TR-2.0 | |
| | | | Sample Type | FD | | N | | N | | N | | N | | N | |
| | | | Sample Date | 06/16/2014 | | 05/21/2014 | | 06/16/2014 | | 05/08/2014 | | 05/28/2014 | | 05/20/2014 | |
| | | | SDG | PH234 | | PH193 | | PH234 | | PH173 | | PH204 | | PH189 | |
| | | | Start Depth | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | |
| | | | End Depth | 3 | | 3 | | 3 | | 3 | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.976 | U | 1.02 | J-EMPC U (B) | 1 | U | 1.01 | J-EMPC U (B) | 1.08 | U | 1.03 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 1.8 | J (Z) | 0.0395 | J (Z) | 1.19 | J (Z) | 21.9 | | 5.41 | J-EMPC U (B) | 0.183 | J-EMPC J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 2800 | J (FD) | 10.2 | U (B) | 980 | J (FD, Q) | 10200 | J (*#) | 80.9 | | 4.52 | J (Z) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 104 | J (FD) | 5.11 | U (B) | 35.5 | J (FD) | 1210 | | 8.73 | | 5.14 | J-EMPC U (B) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 32 | J (FD) | 10.2 | U (B) | 10 | J (FD, Z) | 257 | | 1.57 | J (Z) | 10.3 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.59 | J (FD, Z) | 5.11 | J-EMPC U (B) | 0.225 | J-EMPC J (FD, Z) | 10.7 | | 5.41 | U (B) | 5.14 | U |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 4.88 | J-EMPC UJ (B, FD) | 0.0245 | J-EMPC J (Z) | 5.01 | J-EMPC UJ (B, FD) | 4.52 | J (Z) | 5.41 | U (B) | 5.14 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.172 | J-EMPC J (FD, Z) | 1.02 | U | 0.102 | J (FD, Z) | 0.264 | J (Z) | 1.08 | U | 1.03 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 0.366 | J (FD, Z) | 5.11 | U (B) | 5.01 | UJ (B, FD) | 11.7 | | 5.41 | J-EMPC U (B) | 5.14 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 0.31 | J-EMPC J (FD, Z) | 5.11 | U | 0.162 | J-EMPC J (FD, Z) | 1.5 | J (Z) | 5.41 | J-EMPC U (B) | 5.14 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.359 | J-EMPC J (Z) | 5.11 | U (B) | 5.01 | U (B) | 0.761 | J (Z) | 0.354 | J (Z) | 5.14 | J-EMPC U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.29 | J-EMPC J (Z) | 5.11 | J-EMPC U (B) | 0.219 | J-EMPC J (Z) | 4.44 | J (Z) | 5.41 | J-EMPC U (B) | 5.14 | U |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 2.81 | J (FD, Z) | 0.0356 | J (Z) | 1.31 | J (FD, Z) | 54.7 | | 5.41 | U (B) | 5.14 | U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.491 | J (Z) | 5.11 | U (B) | 0.304 | J-EMPC J (Z) | 9.77 | | 5.41 | U (B) | 5.14 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 8.99 | J (FD) | 5.11 | U (B) | 3.21 | J (FD, Z) | 137 | | 0.674 | J-EMPC J (Z) | 5.14 | J-EMPC U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.529 | J (FD, Z) | 0.0367 | J-EMPC J (Z) | 0.252 | J (FD, Z) | 3.42 | J (Z) | 5.41 | J-EMPC U (B) | 5.14 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.505 | J (Z) | 5.11 | J-EMPC U (B) | 0.406 | J-EMPC J (Z) | 5.04 | U | 5.41 | J-EMPC U (B) | 5.14 | J-EMPC U (B) |

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R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-569-SA6-TR-2.5 | | FDG2-SL-877-SA5A-SB-3.0-4.0 | | SL-529-SA5B-TR-3.0 | | SL-693-SA5B-TR-3.0 | | SL-699-SA5B-TR-3.0 | | SL-707-SA5B-TR-3.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 05/20/2014 | | 06/16/2014 | | 05/28/2014 | | 05/28/2014 | | 05/28/2014 | | 05/27/2014 | |
| | | | SDG | PH189 | | PH234 | | PH204 | | PH204 | | PH204 | | PH201 | |
| | | | Start Depth | 2.5 | | 3 | | 3 | | 3 | | 3 | | 3 | |
| | | | End Depth | | | 4 | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.02 | U | 0.999 | U | 1.04 | U (B) | 1.03 | U | 1.03 | J-EMPC U (B) | 1.02 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.12 | U (B) | 4.99 | J-EMPC U (B) | 0.459 | J-EMPC J (Z) | 5.13 | J-EMPC U (B) | 0.438 | J-EMPC J (Z) | 0.313 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 10.2 | U (B) | 96.7 | | 241 | | 30.8 | | 97.4 | | 112 | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.12 | U (B) | 3.38 | J (Z) | 17.2 | | 2.18 | J (Z) | 7.91 | | 11.1 | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.2 | J-EMPC U (B) | 1.08 | J (Z) | 5.73 | J (Z) | 10.3 | J-EMPC U (B) | 5.64 | J (Z) | 9.89 | J (Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.12 | U | 0.052 | J (Z) | 5.2 | U (B) | 5.13 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.09 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.12 | U | 4.99 | J-EMPC U (B) | 5.2 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.13 | U (B) | 5.09 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.02 | U | 0.999 | U | 0.0527 | J (Z) | 1.03 | U | 0.108 | J (Z) | 1.02 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.12 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.2 | U (B) | 5.13 | J-EMPC U (B) | 5.13 | U (B) | 5.09 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.12 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.2 | U (B) | 5.13 | J-EMPC U (B) | 5.13 | U (B) | 5.09 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.12 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.2 | U (B) | 5.13 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.09 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.12 | U (B) | 4.99 | J-EMPC U (B) | 5.2 | U (B) | 5.13 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.09 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.12 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 0.623 | J-EMPC J (Z) | 5.13 | J-EMPC U (B) | 0.458 | J-EMPC J (Z) | 0.389 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.12 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.2 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 0.134 | J-EMPC J (Z) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.12 | J-EMPC U (B) | 0.322 | J (Z) | 2.28 | J (Z) | 0.524 | J (Z) | 1.72 | J (Z) | 2.55 | J (Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.12 | J-EMPC U (B) | 4.99 | J-EMPC U (B) | 5.2 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.13 | U (B) | 0.134 | J-EMPC J (Z) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.12 | J-EMPC U (B) | 0.105 | J-EMPC J (Z) | 5.2 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.13 | U (B) | 5.09 | J-EMPC U (B) |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-636-SA5A-TR-3.5 | | SL-693-SA5B-TR-3.5 | | FDG2-SL-1174-SA5A-SB-4.0-5.0 | | FDG2-SL-584-SA5D-SB-4.0-5.0 | | FDG2-SL-585-SA5D-SB-4.0-5.0 | | FDG2-SL-874-SA5A-SB-4.0-5.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 05/23/2014 | | 05/27/2014 | | 05/20/2014 | | 05/21/2014 | | 05/21/2014 | | 05/20/2014 | |
| | | | SDG | PH199 | | PH201 | | PH188 | | PH193 | | PH193 | | PH188 | |
| | | | Start Depth | 3.5 | | 3.5 | | 4 | | 4 | | 4 | | 4 | |
| | | | End Depth | | | | | 5 | | 5 | | 5 | | 5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.02 | J-EMPC U (B) | 1.02 | U | 1.08 | U | 1.04 | U | 1.13 | U | 1.05 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.545 | J (Z) | 0.0802 | J-EMPC J (Z) | 0.392 | J (Z) | 0.0748 | J-EMPC J (Z) | 0.0701 | J-EMPC J (Z) | 0.447 | J (Z) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 3.87 | J (Z) | 1.7 | J (Z) | 6.72 | J (FD, Z) | 7.55 | J (Z) | 4.25 | J (Z) | 14 | J-EMPC J (FD) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.09 | U (B) | 5.11 | U (B) | 0.842 | J (FD, Z) | 0.912 | J-EMPC J (Z) | 5.66 | J-EMPC U (B) | 1.76 | J (FD, Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.2 | J-EMPC U (B) | 10.2 | J-EMPC U (B) | 0.5 | J (FD, Z) | 10.4 | U (B) | 11.3 | J-EMPC U (B) | 0.953 | J (FD, Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.09 | J-EMPC U (B) | 5.11 | U | 5.38 | UJ (FD) | 5.19 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 0.0535 | J-EMPC J (FD, Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.09 | U (B) | 5.11 | U | 5.38 | J-EMPC U (B) | 0.0676 | J-EMPC J (Z) | 0.0931 | J-EMPC J (Z) | 5.27 | J-EMPC U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.02 | U | 1.02 | U | 0.122 | J-EMPC J (FD, Z) | 1.04 | U | 1.13 | U | 1.05 | UJ (FD) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.11 | U | 5.38 | J-EMPC U (B) | 5.19 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.27 | U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.09 | U (B) | 5.11 | U | 5.38 | J-EMPC U (B) | 5.19 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.27 | U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.09 | U (B) | 5.11 | U | 5.38 | J-EMPC U (B) | 5.19 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.27 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.09 | U | 5.11 | U (B) | 5.38 | J-EMPC U (B) | 5.19 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.27 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.09 | J-EMPC U (B) | 0.054 | J-EMPC J (Z) | 0.297 | J-EMPC J (Z) | 0.126 | J-EMPC J (Z) | 0.0755 | J (Z) | 0.394 | J-EMPC J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.11 | U | 5.38 | J-EMPC U (B) | 5.19 | U (B) | 5.66 | J-EMPC U (B) | 5.27 | U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.38 | UJ (B, FD) | 5.19 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 0.386 | J-EMPC J (FD, Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.09 | U (B) | 5.11 | J-EMPC U (B) | 5.38 | J-EMPC U (B) | 0.049 | J-EMPC J (Z) | 0.0625 | J (Z) | 5.27 | J-EMPC U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 0.37 | J (Z) | 5.19 | U (B) | 5.66 | U (B) | 0.422 | J-EMPC J (Z) |

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(Z, etc.) – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-876-SA5A-SB-4.0-5.0 | | FDG-SL-748-SA5C-SB-4.0-5.0 | | FDG-SL-757-SA5C-SB-4.0-5.0 | | FDG-SL-841-SA5B-SB-4.0-5.0 | | FDG-SL-842-SA5B-SB-4.0-5.0 | | SL-838-SA5B-SB-4.0-5.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 06/16/2014 | | 05/12/2014 | | 05/14/2014 | | 05/14/2014 | | 05/14/2014 | | 01/13/2014 | |
| | | | SDG | PH234 | | PH175 | | PH177 | | PH177 | | PH177 | | PH158 | |
| | | | Start Depth | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | |
| | | | End Depth | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.02 | J-EMPC U (B) | 1.03 | U | 1.09 | U | 0.123 | J-EMPC J (Z) | 0.101 | J-EMPC J (Z) | 1.06 | J-EMPC UJ (B, FD) |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.35 | J (Z) | 5.15 | U | 1.25 | J (Z) | 0.541 | J (Z) | 4.09 | J (Z) | 5.28 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 112 | | 6.71 | J (Z) | 1000 | | 1.69 | J (Z) | 1430 | | 9.67 | J (Z) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.89 | | 0.715 | J (Z) | 68 | | 5.34 | J-EMPC U (B) | 118 | | 0.807 | J-EMPC J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 1.84 | J-EMPC J (Z) | 10.3 | J-EMPC U (B) | 33.4 | | 10.7 | J-EMPC U (B) | 81.8 | | 10.6 | U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.193 | J-EMPC J (Z) | 5.15 | U | 0.485 | J (Z) | 0.0809 | J-EMPC J (Z) | 2.01 | J (Z) | 5.28 | J-EMPC UJ (B, FD) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.09 | J-EMPC U (B) | 5.15 | U | 0.364 | J-EMPC J (Z) | 0.21 | J-EMPC J (Z) | 0.888 | J-EMPC J (Z) | 0.184 | J (FD, Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.02 | U | 1.03 | U | 0.0666 | J (Z) | 0.156 | J (Z) | 1.05 | U | 0.0752 | J-EMPC J (FD, Z) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.15 | J-EMPC U (B) | 0.694 | J-EMPC J (Z) | 0.0517 | J-EMPC J (Z) | 2.6 | J (Z) | 5.28 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.09 | J-EMPC U (B) | 5.15 | U | 0.0922 | J-EMPC J (Z) | 0.265 | J (Z) | 0.17 | J-EMPC J (Z) | 5.28 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.09 | U (B) | 5.15 | U | 5.46 | J-EMPC U (B) | 0.465 | J-EMPC J (Z) | 5.24 | J-EMPC U (B) | 5.28 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.15 | U | 0.321 | J (Z) | 0.158 | J (Z) | 2.11 | J (Z) | 5.28 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.35 | J-EMPC J (Z) | 0.0501 | J (Z) | 2.19 | J (Z) | 0.341 | J (Z) | 3.31 | J (Z) | 0.188 | J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.15 | U | 0.516 | J-EMPC J (Z) | 0.0989 | J-EMPC J (Z) | 2.17 | J (Z) | 5.28 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.592 | J (Z) | 5.15 | J-EMPC U (B) | 11.4 | | 5.34 | J-EMPC U (B) | 32.9 | | 5.28 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.15 | U | 0.43 | J (Z) | 0.164 | J-EMPC J (Z) | 1.26 | J (Z) | 5.28 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.211 | J (Z) | 5.15 | U | 0.122 | J (Z) | 0.337 | J (Z) | 0.26 | J-EMPC J (Z) | 0.193 | J-EMPC J (Z) |

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Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-839-SA5B-SB-4.0-5.0 | | SL-840-SA5B-SB-4.0-5.0 | | SL-843-SA5B-SB-4.0-5.0 | | SL-503-SA5C-TR-5.0 | | SL-534-SA8-TR-5.0 | | SL-548-SA8-TR-5.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 01/14/2014 | | 01/13/2014 | | 01/14/2014 | | 05/29/2014 | | 05/19/2014 | | 05/19/2014 | |
| | | | SDG | PH159 | | PH158 | | PH159 | | PH207 | | PH185 | | PH185 | |
| | | | Start Depth | 4 | | 4 | | 4 | | 5 | | 5 | | 5 | |
| | | | End Depth | 5 | | 5 | | 5 | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.08 | U | 1.08 | J-EMPC U (B) | 0.137 | J-EMPC J (Z) | 1.11 | U | 1.04 | U | 1.15 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.299 | J (Z) | 5.41 | J-EMPC U (B) | 0.366 | J-EMPC J (Z) | 5.53 | U (B) | 5.18 | J-EMPC U (B) | 5.77 | U |
| 1613B | 3268-87-9 | OCDD | ng/kg | 2.31 | J-EMPC J (Z) | 4.65 | J (Z) | 10.6 | J (Z) | 15.7 | | 4.14 | J (Z) | 11.5 | U (B) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.42 | J-EMPC U (B) | 0.578 | J-EMPC J (Z) | 1.18 | J (Z) | 0.814 | J (Z) | 0.393 | J (Z) | 5.77 | U (B) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.8 | J-EMPC U (B) | 10.8 | U (B) | 11.3 | U (B) | 11.1 | J-EMPC U (B) | 0.781 | J-EMPC J (Z) | 11.5 | J-EMPC UJ (B, FD) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.42 | UJ (FD) | 5.41 | U | 5.63 | J-EMPC U (B) | 5.53 | U | 0.0213 | J-EMPC J (Z) | 0.031 | J-EMPC J (Z) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.093 | J-EMPC J (FD, Z) | 5.41 | U | 0.311 | J (Z) | 5.53 | U | 0.0283 | J-EMPC J (Z) | 0.0232 | J-EMPC J (FD, Z) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.08 | UJ (FD) | 1.08 | U | 0.149 | J-EMPC J (Z) | 1.11 | U | 1.04 | U | 1.15 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.42 | J-EMPC UJ (B, FD) | 5.41 | J-EMPC U (B) | 5.63 | U (B) | 5.53 | J-EMPC U (B) | 5.18 | U (B) | 5.77 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.42 | J-EMPC UJ (B, FD) | 5.41 | J-EMPC U (B) | 5.63 | U (B) | 5.53 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.77 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.42 | J-EMPC U (B) | 5.41 | J-EMPC U (B) | 0.444 | J-EMPC J (Z) | 0.0542 | J (Z) | 5.18 | U (B) | 5.77 | UJ (B, FD) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.42 | J-EMPC UJ (B, FD) | 5.41 | J-EMPC U (B) | 0.247 | J-EMPC J (Z) | 5.53 | U | 5.18 | J-EMPC U (B) | 5.77 | J-EMPC UJ (B, FD) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.42 | J-EMPC U (B) | 5.41 | U (B) | 0.275 | J (Z) | 5.53 | J-EMPC U (B) | 5.18 | U (B) | 5.77 | J-EMPC UJ (B, FD) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.42 | UJ (B, FD) | 5.41 | J-EMPC U (B) | 5.63 | J-EMPC U (B) | 5.53 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.77 | J-EMPC UJ (B, FD) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.42 | J-EMPC U (B) | 5.41 | U (B) | 5.63 | J-EMPC U (B) | 5.53 | J-EMPC U (B) | 5.18 | U (B) | 5.77 | J-EMPC UJ (B, FD) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.42 | J-EMPC UJ (B, FD) | 5.41 | J-EMPC U (B) | 0.222 | J (Z) | 5.53 | U (B) | 5.18 | J-EMPC U (B) | 5.77 | UJ (B, FD) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.42 | U (B) | 5.41 | J-EMPC U (B) | 5.63 | U (B) | 5.53 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 5.77 | U (B) |

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(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-605-SA5C-TR-5.0 | | SL-611-SA8-TR-5.0 | | SL-646-SA5C-TR-5.0 | | SL-651-SA5C-TR-5.0 | | SL-653-SA5C-TR-5.0 | | SL-655-SA5C-TR-5.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 05/29/2014 | | 05/20/2014 | | 06/04/2014 | | 05/30/2014 | | 06/02/2014 | | 06/04/2014 | |
| | | | SDG | PH207 | | PH189 | | PH217 | | PH209 | | PH212 | | PH217 | |
| | | | Start Depth | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | |
| | | | End Depth | | | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 0.0572 | J-EMPC J (Z) | 0.0883 | J-EMPC J (Z) | 1.03 | U | 0.061 | J-EMPC J (FD, Z) | 0.26 | J-EMPC J (Z) | 1.01 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.37 | U (B) | 5.33 | U (B) | 5.17 | J-EMPC U (B) | 5.11 | J-EMPC UJ (B, FD) | 0.104 | J-EMPC J (Z) | 5.03 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 52.2 | | 10.7 | U (B) | 1.62 | J (Z) | 13.8 | | 3.06 | J (Z) | 5.01 | J (Z) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 6.56 | | 5.33 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 2.1 | J (Z) | 5.01 | U (B) | 0.795 | J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 2.4 | J (Z) | 10.7 | U (B) | 10.3 | J-EMPC U (B) | 10.2 | U (B) | 10 | J-EMPC U (B) | 10.1 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.37 | U | 5.33 | U | 5.17 | U | 5.11 | J-EMPC U (B) | 5.01 | U | 5.03 | U |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.37 | J-EMPC U (B) | 5.33 | J-EMPC U (B) | 5.17 | U | 5.11 | UJ (B, FD) | 0.112 | J-EMPC J (Z) | 5.03 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.07 | J-EMPC U (B) | 1.07 | U | 1.03 | U | 1.02 | U | 1 | U | 1.01 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.37 | U (B) | 5.33 | U | 5.17 | U | 5.11 | J-EMPC U (B) | 5.01 | J-EMPC U (B) | 5.03 | U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.37 | J-EMPC U (B) | 5.33 | U (B) | 5.17 | J-EMPC U (B) | 5.11 | J-EMPC UJ (B, FD) | 5.01 | J-EMPC U (B) | 5.03 | U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.265 | J (Z) | 5.33 | J-EMPC U (B) | 5.17 | U | 5.11 | U (B) | 5.01 | J-EMPC U (B) | 5.03 | J-EMPC U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.37 | U (B) | 5.33 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.11 | J-EMPC U (B) | 5.01 | U | 5.03 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.37 | J-EMPC U (B) | 5.33 | U | 5.17 | J-EMPC U (B) | 5.11 | J-EMPC UJ (B, FD) | 5.01 | U | 5.03 | U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.37 | J-EMPC U (B) | 5.33 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.11 | U (B) | 5.01 | U | 5.03 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.769 | J (Z) | 5.33 | U (B) | 5.17 | J-EMPC U (B) | 0.321 | J (Z) | 5.01 | U (B) | 5.03 | J-EMPC U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.37 | J-EMPC U (B) | 5.33 | U | 5.17 | J-EMPC U (B) | 5.11 | U (B) | 5.01 | J-EMPC U (B) | 5.03 | J-EMPC U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.37 | J-EMPC U (B) | 5.33 | J-EMPC U (B) | 5.17 | J-EMPC U (B) | 5.11 | UJ (FD) | 5.01 | J-EMPC U (B) | 5.03 | U (B) |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-686-SA6-TR-5.0 | | SL-693-SA5B-TR-5.0 | | SL-848-SA8-TR-5.0 | | SL-951-SA5C-TR-5.0 | | SL-587-SA5A-TR-5.5 | | SL-887-SA5A-TR-5.5 | |
| | | | Sample Type | N | | N | | FD | | FD | | N | | N | |
| | | | Sample Date | 05/21/2014 | | 05/27/2014 | | 05/19/2014 | | 05/30/2014 | | 05/22/2014 | | 05/22/2014 | |
| | | | SDG | PH192 | | PH201 | | PH185 | | PH209 | | PH195 | | PH195 | |
| | | | Start Depth | 5 | | 5 | | 5 | | 5 | | 5.5 | | 5.5 | |
| | | | End Depth | | | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.02 | U | 1.04 | U | 1.12 | U | 1.04 | UJ (FD) | 1.08 | U | 1.11 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.129 | J (Z) | 0.178 | J (Z) | 5.59 | U | 5.18 | J-EMPC UJ (B, FD) | 5.4 | J-EMPC U (B) | 5.53 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 41.2 | | 7.98 | J (Z) | 11.2 | U (B) | 11.1 | | 301 | J (FD, Q) | 175 | J (FD) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 2.42 | J-EMPC J (Z) | 0.885 | J-EMPC J (Z) | 5.59 | J-EMPC U (B) | 1.55 | J (Z) | 17.4 | J (FD) | 10.3 | J (FD) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.2 | J-EMPC U (B) | 10.4 | U (B) | 11.2 | J-EMPC UJ (B, FD) | 10.4 | U (B) | 8.04 | J (Z) | 5.35 | J (Z) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.0604 | J-EMPC J (Z) | 5.21 | U | 0.0245 | J-EMPC J (Z) | 5.18 | J-EMPC U (B) | 5.4 | J-EMPC U (B) | 5.53 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 0.116 | J (Z) | 0.045 | J-EMPC J (Z) | 5.59 | UJ (FD) | 5.18 | UJ (FD) | 5.4 | U (B) | 5.53 | J-EMPC U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.02 | U | 1.04 | U | 1.12 | U | 1.04 | U | 1.08 | U | 1.11 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.21 | U (B) | 5.59 | J-EMPC U (B) | 5.18 | J-EMPC U (B) | 0.592 | J (Z) | 0.4 | J (Z) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.09 | U (B) | 5.21 | U (B) | 5.59 | J-EMPC U (B) | 5.18 | J-EMPC UJ (B, FD) | 5.4 | J-EMPC U (B) | 5.53 | U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 0.119 | J-EMPC J (Z) | 5.21 | U (B) | 5.59 | UJ (B, FD) | 5.18 | J-EMPC U (B) | 5.4 | J-EMPC U (B) | 5.53 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.0737 | J-EMPC J (Z) | 5.21 | U (B) | 5.59 | UJ (FD) | 5.18 | J-EMPC U (B) | 0.255 | J (Z) | 0.249 | J-EMPC J (Z) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.0889 | J-EMPC J (Z) | 0.103 | J (Z) | 5.59 | UJ (FD) | 5.18 | J-EMPC UJ (B, FD) | 0.42 | J-EMPC J (Z) | 0.341 | J-EMPC J (Z) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.0398 | J-EMPC J (Z) | 5.21 | J-EMPC U (B) | 5.59 | UJ (B, FD) | 5.18 | J-EMPC U (B) | 0.331 | J (Z) | 5.53 | U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.21 | U (B) | 5.59 | J-EMPC UJ (B, FD) | 5.18 | U (B) | 3.75 | J (Z) | 2.45 | J (Z) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.09 | U (B) | 5.21 | J-EMPC U (B) | 5.59 | UJ (B, FD) | 5.18 | U (B) | 0.397 | J-EMPC J (FD, Z) | 5.53 | J-EMPC UJ (B, FD) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.09 | J-EMPC U (B) | 5.21 | J-EMPC U (B) | 5.59 | J-EMPC U (B) | 5.18 | J-EMPC UJ (B, FD) | 5.4 | U (B) | 5.53 | U (B) |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-570-SA6-TR-6.0 | | SL-730-SA5A-TR-6.0 | | SL-840-SA5B-SB-7.0-8.0 | | SL-843-SA5B-SB-7.0-8.0 | | SL-503-SA5C-TR-7.5 | | SL-636-SA5A-TR-7.5 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 05/20/2014 | | 05/22/2014 | | 01/13/2014 | | 01/14/2014 | | 05/29/2014 | | 05/23/2014 | |
| | | | SDG | PH189 | | PH195 | | PH158 | | PH159 | | PH207 | | PH199 | |
| | | | Start Depth | 6 | | 6 | | 7 | | 7 | | 7.5 | | 7.5 | |
| | | | End Depth | | | | | 8 | | 8 | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.06 | U | 1.07 | J-EMPC U (B) | 1.13 | U | 1.11 | U | 1.04 | U | 1.02 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.3 | J-EMPC U (B) | 5.35 | J-EMPC U (B) | 5.66 | U (B) | 0.194 | J-EMPC J (Z) | 5.2 | J-EMPC U (B) | 5.12 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 10.6 | U (B) | 4.8 | J (Z) | 1.77 | J (Z) | 36.6 | | 9.95 | J (Z) | 10.2 | U (B) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.3 | U (B) | 0.538 | J (Z) | 5.66 | U (B) | 3.3 | J (Z) | 5.2 | U (B) | 5.12 | J-EMPC U (B) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.6 | J-EMPC U (B) | 10.7 | U (B) | 11.3 | J-EMPC U (B) | 1.46 | J (Z) | 10.4 | J-EMPC U (B) | 10.2 | J-EMPC U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.3 | U | 5.35 | J-EMPC U (B) | 5.66 | U | 5.56 | J-EMPC U (B) | 5.2 | U | 5.12 | J-EMPC U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.3 | J-EMPC U (B) | 5.35 | J-EMPC U (B) | 5.66 | U | 0.105 | J-EMPC J (Z) | 5.2 | J-EMPC U (B) | 5.12 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0531 | J-EMPC J (Z) | 1.07 | U | 1.13 | U | 0.0741 | J-EMPC J (Z) | 1.04 | U | 1.02 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.3 | J-EMPC U (B) | 5.35 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.56 | J-EMPC U (B) | 5.2 | J-EMPC U (B) | 5.12 | U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.3 | J-EMPC U (B) | 5.35 | J-EMPC U (B) | 5.66 | U (B) | 5.56 | J-EMPC U (B) | 5.2 | U | 5.12 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.3 | U (B) | 5.35 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.56 | U (B) | 0.0412 | J-EMPC J (Z) | 5.12 | J-EMPC U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.3 | J-EMPC U (B) | 5.35 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.56 | U (B) | 5.2 | J-EMPC U (B) | 5.12 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.3 | U | 5.35 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.56 | U (B) | 5.2 | J-EMPC U (B) | 5.12 | J-EMPC U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.3 | U | 5.35 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 5.56 | U (B) | 5.2 | J-EMPC U (B) | 5.12 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.3 | U (B) | 5.35 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 0.631 | J (Z) | 5.2 | J-EMPC U (B) | 5.12 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.3 | J-EMPC U (B) | 5.35 | J-EMPC U (B) | 5.66 | J-EMPC U (B) | 0.161 | J (Z) | 5.2 | J-EMPC U (B) | 5.12 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.3 | U | 5.35 | J-EMPC U (B) | 5.66 | U (B) | 5.56 | U (B) | 5.2 | U (B) | 5.12 | J-EMPC U (B) |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-757-SA5C-SB-8.0-9.0 | | SL-699-SA5B-TR-8.0 | | FDG-SL-841-SA5B-SB-9.0-10.0 | | SL-839-SA5B-SB-9.0-10.0 | | SL-548-SA8-TR-10.0 | | SL-605-SA5C-TR-10.0 | |
| | | | Sample Type | N | | N | | N | | N | | N | | N | |
| | | | Sample Date | 05/14/2014 | | 05/28/2014 | | 05/14/2014 | | 01/14/2014 | | 05/19/2014 | | 05/29/2014 | |
| | | | SDG | PH177 | | PH204 | | PH177 | | PH159 | | PH185 | | PH207 | |
| | | | Start Depth | 8 | | 8 | | 9 | | 9 | | 10 | | 10 | |
| | | | End Depth | 9 | | | | 10 | | 10 | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.05 | U | 1.07 | J-EMPC U (B) | 0.131 | J-EMPC J (Z) | 0.064 | J-EMPC J (Z) | 1.14 | U (B) | 1.09 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.27 | U | 5.33 | J-EMPC U (B) | 0.124 | J-EMPC J (Z) | 0.385 | J (Z) | 5.69 | J-EMPC U (B) | 5.45 | J-EMPC U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 10.1 | J (Z) | 10.7 | J-EMPC U (B) | 10.6 | J-EMPC U (B) | 34 | | 11.4 | J-EMPC U (B) | 5.73 | J (Z) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 5.27 | U (B) | 5.33 | J-EMPC U (B) | 5.32 | J-EMPC U (B) | 4.26 | J (Z) | 5.69 | J-EMPC U (B) | 5.45 | U (B) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.5 | U (B) | 10.7 | J-EMPC U (B) | 10.6 | J-EMPC U (B) | 6.51 | J (Z) | 11.4 | J-EMPC U (B) | 10.9 | U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.042 | J-EMPC J (Z) | 5.33 | J-EMPC U (B) | 5.32 | U | 5.13 | J-EMPC U (B) | 5.69 | U | 5.45 | U (B) |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.27 | U | 5.33 | J-EMPC U (B) | 0.207 | J (Z) | 0.0711 | J-EMPC J (Z) | 0.0744 | J-EMPC J (Z) | 5.45 | J-EMPC U (B) |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.05 | U | 1.07 | U | 0.0488 | J-EMPC J (Z) | 1.03 | U | 0.0245 | J-EMPC J (Z) | 1.09 | J-EMPC U (B) |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.27 | U | 5.33 | J-EMPC U (B) | 0.0495 | J (Z) | 5.13 | J-EMPC U (B) | 5.69 | J-EMPC U (B) | 5.45 | J-EMPC U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.27 | U | 5.33 | J-EMPC U (B) | 0.132 | J-EMPC J (Z) | 5.13 | U (B) | 5.69 | J-EMPC U (B) | 5.45 | U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.27 | J-EMPC U (B) | 5.33 | J-EMPC U (B) | 5.32 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | 5.69 | J-EMPC U (B) | 0.125 | J-EMPC J (Z) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 0.0175 | J-EMPC J (Z) | 5.33 | J-EMPC U (B) | 0.0727 | J-EMPC J (Z) | 5.13 | J-EMPC U (B) | 5.69 | J-EMPC U (B) | 5.45 | U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.0248 | J-EMPC J (Z) | 5.33 | J-EMPC U (B) | 0.0701 | J (Z) | 0.316 | J-EMPC J (Z) | 5.69 | J-EMPC U (B) | 5.45 | J-EMPC U (B) |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 0.0223 | J-EMPC J (Z) | 5.33 | J-EMPC U (B) | 0.0534 | J-EMPC J (Z) | 5.13 | J-EMPC U (B) | 5.69 | U (B) | 5.45 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.27 | J-EMPC U (B) | 5.33 | J-EMPC U (B) | 5.32 | J-EMPC U (B) | 1.24 | J (Z) | 5.69 | U (B) | 5.45 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 0.0237 | J (Z) | 5.33 | J-EMPC U (B) | 0.1 | J-EMPC J (Z) | 5.13 | J-EMPC U (B) | 5.69 | J-EMPC U (B) | 5.45 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.27 | U | 5.33 | J-EMPC U (B) | 0.0302 | J-EMPC J (Z) | 5.13 | U (B) | 5.69 | J-EMPC U (B) | 5.45 | J-EMPC U (B) |

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J – Result is an estimated value
R – Result is rejected
(Z, etc.) – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | | SL-651-SA5C-TR-10.0 | | SL-653-SA5C-TR-10.0 | | SL-611-SA8-TR-10.5 | | SL-529-SA5B-TR-11.0 | | SL-686-SA6-TR-11.0 | | FDG2-SL-874-SA5A-SB-12.0-13.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | | N | | N | | N | | N | | N | | N | |
| | | | | Sample Date | | 05/30/2014 | | 06/02/2014 | | 05/20/2014 | | 05/28/2014 | | 05/21/2014 | | 05/20/2014 | |
| | | | | SDG | | PH209 | | PH212 | | PH189 | | PH204 | | PH192 | | PH188 | |
| | | | | Start Depth | | 10 | | 10 | | 10.5 | | 11 | | 11 | | 12 | |
| | | | | End Depth | | | | | | | | | | | | 13 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.01 | U | 1.01 | U | 0.0778 | J-EMPC J (Z) | 1.06 | J-EMPC U (B) | 1.03 | U | 1.03 | U | | |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.396 | J-EMPC J (Z) | 0.0529 | J-EMPC J (Z) | 5.39 | J-EMPC U (B) | 0.422 | J-EMPC J (Z) | 0.053 | J-EMPC J (Z) | 5.13 | U | | |
| 1613B | 3268-87-9 | OCDD | ng/kg | 15.5 | | 10.1 | U (B) | 4.16 | J (Z) | 117 | | 21.1 | | 10.3 | U (B) | | |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 1.12 | J (Z) | 5.07 | J-EMPC U (B) | 5.39 | J-EMPC U (B) | 9.56 | | 1.08 | J (Z) | 5.13 | J-EMPC U (B) | | |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.1 | U (B) | 10.1 | J-EMPC U (B) | 0.44 | J (Z) | 3.83 | J (Z) | 10.3 | U (B) | 10.3 | J-EMPC U (B) | | |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | U | 0.1 | J (Z) | 5.3 | J-EMPC U (B) | 0.0507 | J-EMPC J (Z) | 5.13 | U | | |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | U | 5.39 | J-EMPC U (B) | 5.3 | U | 5.14 | U | 5.13 | J-EMPC U (B) | | |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 0.0779 | J (Z) | 1.01 | U | 0.232 | J (Z) | 0.0457 | J-EMPC J (Z) | 1.03 | U | 1.03 | U | | |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 5.39 | J-EMPC U (B) | 5.3 | J-EMPC U (B) | 5.14 | J-EMPC U (B) | 5.13 | U (B) | | |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | U | 5.39 | U (B) | 5.3 | U (B) | 5.14 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | | |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 1.95 | J (Z) | 5.3 | U (B) | 0.0356 | J-EMPC J (Z) | 5.13 | U (B) | | |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | U | 0.227 | J-EMPC J (Z) | 5.3 | J-EMPC U (B) | 0.0371 | J-EMPC J (Z) | 5.13 | J-EMPC U (B) | | |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 0.384 | J-EMPC J (Z) | 5.07 | J-EMPC U (B) | 5.39 | J-EMPC U (B) | 5.3 | J-EMPC U (B) | 0.0622 | J-EMPC J (Z) | 5.13 | U | | |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | U | 5.39 | U (B) | 5.3 | J-EMPC U (B) | 0.0215 | J-EMPC J (Z) | 5.13 | J-EMPC U (B) | | |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 0.278 | J-EMPC J (Z) | 5.07 | J-EMPC U (B) | 5.39 | U (B) | 1.39 | J (Z) | 5.14 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | | |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.07 | J-EMPC U (B) | 5.07 | J-EMPC U (B) | 5.39 | J-EMPC U (B) | 5.3 | J-EMPC U (B) | 5.14 | J-EMPC U (B) | 5.13 | J-EMPC U (B) | | |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 0.33 | J-EMPC J (Z) | 5.07 | J-EMPC U (B) | 5.39 | J-EMPC U (B) | 5.3 | U (B) | 5.14 | U (B) | 5.13 | U | | |

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J – Result is an estimated value
R – Result is rejected
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Definitions are provided at the beginning of Appendix A. The letters in parenthesis can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-15.0 | | SL-653-SA5C-TR-15.0 | | SL-839-SA5B-SB-15.5-16.5 | |
| | | | Sample Type | N | | N | | N | |
| | | | Sample Date | 05/30/2014 | | 06/02/2014 | | 01/14/2014 | |
| | | | SDG | PH209 | | PH212 | | PH159 | |
| | | | Start Depth | 15 | | 15 | | 15.5 | |
| | | | End Depth | | | | | 16.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 1613B | 1746-01-6 | 2,3,7,8-TCDD | ng/kg | 1.04 | U | 0.984 | U | 1.13 | U |
| 1613B | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.21 | J-EMPC U (B) | 0.289 | J-EMPC J (Z) | 5.65 | U (B) |
| 1613B | 3268-87-9 | OCDD | ng/kg | 9.79 | J (Z) | 2.51 | J (Z) | 3.21 | J (Z) |
| 1613B | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin | ng/kg | 0.808 | J (Z) | 4.92 | J-EMPC U (B) | 0.733 | J (Z) |
| 1613B | 39001-02-0 | OCDF | ng/kg | 10.4 | J-EMPC U (B) | 9.84 | U (B) | 11.3 | U (B) |
| 1613B | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.21 | J-EMPC U (B) | 4.92 | U | 5.65 | U |
| 1613B | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo-p-Dioxin | ng/kg | 5.21 | J-EMPC U (B) | 4.92 | U | 5.65 | U |
| 1613B | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran | ng/kg | 1.04 | U | 0.984 | U | 1.13 | U |
| 1613B | 55673-89-7 | 1,2,3,4,7,8,9-HPCDF | ng/kg | 5.21 | U (B) | 4.92 | U | 5.65 | U (B) |
| 1613B | 57117-31-4 | 2,3,4,7,8-PECDF | ng/kg | 5.21 | U (B) | 4.92 | U (B) | 5.65 | J-EMPC U (B) |
| 1613B | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran | ng/kg | 5.21 | J-EMPC U (B) | 4.92 | J-EMPC U (B) | 5.65 | U (B) |
| 1613B | 57117-44-9 | 1,2,3,6,7,8-HXCDF | ng/kg | 5.21 | U (B) | 0.0882 | J-EMPC J (Z) | 5.65 | J-EMPC U (B) |
| 1613B | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin | ng/kg | 5.21 | J-EMPC U (B) | 4.92 | J-EMPC U (B) | 5.65 | U |
| 1613B | 60851-34-5 | 2,3,4,6,7,8-HXCDF | ng/kg | 5.21 | J-EMPC U (B) | 0.107 | J-EMPC J (Z) | 5.65 | J-EMPC U (B) |
| 1613B | 67562-39-4 | 1,2,3,4,6,7,8-HPCDF | ng/kg | 5.21 | J-EMPC U (B) | 4.92 | J-EMPC U (B) | 5.65 | U (B) |
| 1613B | 70648-26-9 | 1,2,3,4,7,8-HXCDF | ng/kg | 5.21 | U (B) | 4.92 | U (B) | 5.65 | U (B) |
| 1613B | 72918-21-9 | 1,2,3,7,8,9-HXCDF | ng/kg | 5.21 | J-EMPC U (B) | 0.681 | J-EMPC J (Z) | 5.65 | U (B) |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-651-SA5C-TR-10.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | FD | N |
| | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/30/2014 | 05/30/2014 |
| | | | SDG | PH217 | PH209 | PH212 | PH217 | PH217 | PH209 | PH212 | PH217 | PH209 | PH209 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 5 | 5 | 5 | 5 | 10 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8330A | 118-96-7 | 2,4,6-Trinitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 UJ Q | 310 U | 310 UJ Q | 310 U | 310 U | 310 U | 320 U |
| 8330A | 121-14-2 | 2,4-Dinitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 121-82-4 | RDX | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 19406-51-0 | 4-Amino-2,6-Dinitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 2691-41-0 | HMX | µg/kg | 410 U | 420 U | 410 U | 430 UJ Q | 420 U | 420 U | 410 U | 410 U | 420 U | 420 U |
| 8330A | 35572-78-2 | 2-Amino-4,6-Dinitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 479-45-8 | Tetryl | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 55-63-0 | Nitroglycerin | µg/kg | 2000 U | 2100 U | 2000 U | 2100 U | 2100 U | 2100 U | 2100 U | 2100 U | 2100 U | 2100 U |
| 8330A | 59229-75-3 | 2,6-Diamino-4-nitrotoluene | µg/kg | 410 U | 420 U | 410 U | 430 U | 420 U | 420 U | 410 U | 410 U | 420 U | 420 U |
| 8330A | 606-20-2 | 2,6-Dinitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 6629-29-4 | 2,4-Diamino-6-nitrotoluene | µg/kg | 410 U | 420 U | 410 U | 430 U | 420 U | 420 U | 410 U | 410 U | 420 U | 420 U |
| 8330A | 78-11-5 | PETN | µg/kg | 2000 U | 2100 U | 2000 U | 2100 U | 2100 U | 2100 U | 2100 U | 2100 U | 2100 U | 2100 U |
| 8330A | 88-72-2 | 2-Nitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 98-95-3 | Nitrobenzene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 99-08-1 | 3-Nitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 99-35-4 | 1,3,5-Trinitrobenzene | µg/kg | 310 U | 310 U | 310 U | 320 U | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |
| 8330A | 99-65-0 | M-Dinitrobenzene | µg/kg | 310 UJ L | 310 U | 310 U | 320 UJ L | 310 UJ L | 310 U | 310 U | 310 UJ L | 310 U | 320 U |
| 8330A | 99-99-0 | 4-Nitrotoluene | µg/kg | 310 U | 310 U | 310 U | 320 UJ Q | 310 U | 310 U | 310 U | 310 U | 310 U | 320 U |

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Trench samples collected at a discrete interval.

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | SL-653-SA5C-TR-10.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 06/02/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH212 | PH209 | PH212 |
| | | | Start Depth | 10 | 15 | 15 |
| | | | End Depth | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 8330A | 118-96-7 | 2,4,6-Trinitrotoluene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 121-14-2 | 2,4-Dinitrotoluene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 121-82-4 | RDX | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 19406-51-0 | 4-Amino-2,6-Dinitrotoluene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 2691-41-0 | HMX | µg/kg | 420 U | 420 U | 410 U |
| 8330A | 35572-78-2 | 2-Amino-4,6-Dinitrotoluene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 479-45-8 | Tetryl | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 55-63-0 | Nitroglycerin | µg/kg | 3800 U | 2100 U | 2100 U |
| 8330A | 59229-75-3 | 2,6-Diamino-4-nitrotoluene | µg/kg | 420 U | 420 U | 410 U |
| 8330A | 606-20-2 | 2,6-Dinitrotoluene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 6629-29-4 | 2,4-Diamino-6-nitrotoluene | µg/kg | 420 U | 420 U | 410 U |
| 8330A | 78-11-5 | PETN | µg/kg | 2100 U | 2100 U | 2100 U |
| 8330A | 88-72-2 | 2-Nitrotoluene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 98-95-3 | Nitrobenzene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 99-08-1 | 3-Nitrotoluene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 99-35-4 | 1,3,5-Trinitrobenzene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 99-65-0 | M-Dinitrobenzene | µg/kg | 310 U | 320 U | 310 U |
| 8330A | 99-99-0 | 4-Nitrotoluene | µg/kg | 310 U | 320 U | 310 U |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | FD | N | N | N |
| | | | Sample Date | 05/21/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 |
| | | | SDG | PH193 | PH193 | PH193 | PH193 | PH193 | PH193 | PH193 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 2 | 4 | 4 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 3 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8315A | 50-00-0 | Formaldehyde | µg/kg | 2100 U | 21000 U | 21000 U | 21000 U | 2100 U | 2100 U | 2300 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-651-SA5C-TR-10.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | FD | N |
| | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/30/2014 | 05/30/2014 |
| | | | SDG | PH217 | PH209 | PH212 | PH217 | PH217 | PH209 | PH212 | PH217 | PH209 | PH209 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 5 | 5 | 5 | 5 | 10 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015B | 107-21-1 | Ethylene Glycol | mg/kg | -- | 10 U | -- | -- | -- | 10 U | -- | -- | 10 U | 11 U |
| 8015B | 111-46-6 | Diethylene Glycol | mg/kg | -- | 10 U | -- | -- | -- | 10 UJ Q | -- | -- | 10 U | 11 U |
| 8015B | 112-27-6 | Triethylene Glycol | mg/kg | -- | 10 U | -- | -- | -- | 10 UJ Q | -- | -- | 10 U | 11 U |
| 8015B | 57-55-6 | Propylene Glycol | mg/kg | -- | 10 U | -- | -- | -- | 10 U | -- | -- | 10 U | 11 U |
| 8015C | 107-21-1 | Ethylene Glycol | mg/kg | 10 UJ H | -- | 10 U | 11 UJ H | 10 UJ H | -- | 10 U | 10 UJ H | -- | -- |
| 8015C | 111-46-6 | Diethylene Glycol | mg/kg | 10 UJ H | -- | 10 U | 11 UJ H, Q | 10 UJ H | -- | 10 U | 10 UJ H | -- | -- |
| 8015C | 112-27-6 | Triethylene Glycol | mg/kg | 10 UJ H | -- | 10 U | 11 R H, Q | 10 UJ H | -- | 10 U | 10 UJ H | -- | -- |
| 8015C | 57-55-6 | Propylene Glycol | mg/kg | 10 UJ H | -- | 10 U | 11 UJ H | 10 UJ H | -- | 10 U | 10 UJ H | -- | -- |

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Trench samples collected at a discrete interval.

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | SL-653-SA5C-TR-10.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 06/02/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH212 | PH209 | PH212 |
| | | | Start Depth | 10 | 15 | 15 |
| | | | End Depth | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 8015B | 107-21-1 | Ethylene Glycol | mg/kg | -- | 11 U | -- |
| 8015B | 111-46-6 | Diethylene Glycol | mg/kg | -- | 11 U | -- |
| 8015B | 112-27-6 | Triethylene Glycol | mg/kg | -- | 11 U | -- |
| 8015B | 57-55-6 | Propylene Glycol | mg/kg | -- | 11 U | -- |
| 8015C | 107-21-1 | Ethylene Glycol | mg/kg | 10 U | -- | 10 U |
| 8015C | 111-46-6 | Diethylene Glycol | mg/kg | 10 U | -- | 10 U |
| 8015C | 112-27-6 | Triethylene Glycol | mg/kg | 10 U | -- | 10 U |
| 8015C | 57-55-6 | Propylene Glycol | mg/kg | 10 U | -- | 10 U |

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J – Result is an estimated value
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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N | N |
| | | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/09/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 06/04/2014 | 05/30/2014 |
| | | | | SDG | PH224 | PH224 | PH224 | PH217 | PH209 | PH212 | PH217 | PH217 | PH209 |
| | | | | Start Depth | 0 | 0 | 0 | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 5 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8151A | 120-36-5 | Dichlorprop | µg/kg | | 17 R Q | 17 U | 87 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U |
| 8151A | 1918-00-9 | Dicamba | µg/kg | | 12 U | 12 U | 61 U | 12 U | 12 U | 12 U | 13 U | 13 U | 13 U |
| 8151A | 75-99-0 | 2,2-Dichlor-Propionic Acid | µg/kg | | 92 U | 91 U | 460 U | 92 U | 94 U | 92 U | 96 U | 94 U | 94 R Q |
| 8151A | 88-85-7 | Dinitrobutyl Phenol | µg/kg | | 24 R Q | 24 U | 120 U | 25 R L | 25 U | 24 R L, C | 26 R L | 25 R L | 25 U |
| 8151A | 93-65-2 | MCPP | µg/kg | | 2500 U | 2500 U | 13000 UJ C | 2600 U | 2600 U | 2600 U | 2700 U | 2600 U | 2600 U |
| 8151A | 93-72-1 | Silvex (2,4,5-TP) | µg/kg | | 1.7 R Q | 1.7 U | 8.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8151A | 93-76-5 | 2,4,5-T | µg/kg | | 1.7 R Q | 1.7 U | 8.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U |
| 8151A | 94-74-6 | MCPA | µg/kg | | 2500 U | 2500 U | 13000 U | 2600 U | 2600 U | 2600 U | 2700 U | 2600 U | 2600 U |
| 8151A | 94-75-7 | 2,4-D | µg/kg | | 37 R Q | 37 U | 180 U | 37 U | 37 U | 37 U | 38 U | 38 U | 38 U |
| 8151A | 94-82-6 | 2,4-DB | µg/kg | | 20 R FD, Q | 16 J Z, *# | 100 J FD, C | 15 J Z | 15 J Z | 19 | 19 | 18 U | 18 U |

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Trench samples collected at a discrete interval.

| | | | Sample Name | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | FD | N | N | N | N |
| | | | Sample Date | 06/02/2014 | 06/04/2014 | 05/30/2014 | 05/30/2014 | 06/02/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH212 | PH217 | PH209 | PH209 | PH212 | PH209 | PH212 |
| | | | Start Depth | 5 | 5 | 5 | 10 | 10 | 15 | 15 |
| | | | End Depth | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8151A | 120-36-5 | Dichlorprop | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8151A | 1918-00-9 | Dicamba | µg/kg | 12 U | 12 U | 12 U | 13 U | 13 U | 13 U | 12 U |
| 8151A | 75-99-0 | 2,2-Dichlor-Propionic Acid | µg/kg | 92 U | 93 U | 93 U | 94 U | 94 U | 94 U | 93 U |
| 8151A | 88-85-7 | Dinitrobutyl Phenol | µg/kg | 25 R L, C | 25 R L | 25 U | 25 U | 25 R L, C | 25 U | 25 R L, C |
| 8151A | 93-65-2 | MCPP | µg/kg | 2600 U | 2600 U | 2600 U | 2600 U | 2600 U | 2600 U | 2600 U |
| 8151A | 93-72-1 | Silvex (2,4,5-TP) | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8151A | 93-76-5 | 2,4,5-T | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8151A | 94-74-6 | MCPA | µg/kg | 2600 U | 2600 U | 2600 U | 2600 U | 2600 U | 2600 U | 2600 U |
| 8151A | 94-75-7 | 2,4-D | µg/kg | 37 U | 37 U | 37 U | 38 U | 38 U | 38 U | 37 U |
| 8151A | 94-82-6 | 2,4-DB | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-951-SA5C-TR-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/30/2014 |
| | | | SDG | PH217 | PH209 | PH212 | PH217 | PH217 | PH209 | PH212 | PH217 | PH209 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 5 | 5 | 5 | 5 |
| | | | End Depth | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7199 | 18540-29-9 | Chromium (Hexavalent Compounds) | mg/kg | 0.35 J Z | 0.62 | 0.38 J Z | 0.29 J Z | 0.41 U | 0.42 U | 0.42 U | 0.42 U | 0.43 U |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
| | | | Sample Type | N | N | N | N |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH209 | PH212 | PH209 | PH212 |
| | | | Start Depth | 10 | 10 | 15 | 15 |
| | | | End Depth | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | |
| 7199 | 18540-29-9 | Chromium (Hexavalent Compounds) | mg/kg | 0.41 J Z | 0.43 U | 0.44 U | 0.35 J Z |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-564-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 | 06/10/2014 |
| | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 | PH227 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0199 | 0.0164 U | 0.0263 | 0.0169 U | 0.0138 J Z | 0.0152 J Z | 0.0322 |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-566-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-574-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 | 06/12/2014 | 06/18/2014 |
| | | | SDG | PH227 | PH227 | PH235 | PH235 | PH231 | PH231 | PH237 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0359 | 0.375 | 0.0297 | 0.0371 | 0.0286 | 0.0263 | 0.0418 |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-575-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 | FDG2-SL-581-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/18/2014 | 05/22/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 06/09/2014 |
| | | | SDG | PH237 | PH196 | PH196 | PH193 | PH193 | PH193 | PH224 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0145 J Z | 0.0117 J Z | 0.0122 J Z | 0.121 | 0.0591 | 0.0173 U | 0.0280 |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-874-SA5A-SB-0.0-0.5 | FDG2-SL-875-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-1049-SA5C-SB-0.0-0.5 | FDG-SL-511-SA5C-SB-0.0-0.5 | FDG-SL-748-SA5C-SB-0.0-0.5 | FDG-SL-749-SA5C-SB-0.0-0.5 |
| | | | Sample Type | N | N | FD | FD | N | N | N |
| | | | Sample Date | 05/20/2014 | 06/16/2014 | 05/21/2014 | 05/08/2014 | 05/08/2014 | 05/12/2014 | 05/08/2014 |
| | | | SDG | PH188 | PH234 | PH193 | PH173 | PH173 | PH175 | PH173 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0172 U | 0.0234 | 0.0627 | 0.0170 UJ FD | 0.0542 | 0.0201 | 0.0139 J FD, Z |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-757-SA5C-SB-0.0-0.5 | FDG-SL-798-SA5B-SB-0.0-0.5 | FDG-SL-841-SA5B-SB-0.0-0.5 | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-838-SA5B-SB-0.0-0.5 | SL-839-SA5B-SB-0.0-0.5 | SL-840-SA5B-SB-0.0-0.5 | SL-843-SA5B-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/14/2014 | 05/07/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 |
| | | | SDG | PH177 | PH172 | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0292 | 0.0732 | 0.0171 U | 0.0128 J Z | 0.0172 U | 0.0231 | 0.0227 | 0.0239 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-503-SA5C-TR-0.5 | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/29/2014 | 05/28/2014 | 05/19/2014 | 05/19/2014 | 05/20/2014 | 05/20/2014 | 05/22/2014 | 05/29/2014 | 05/20/2014 | 05/23/2014 |
| | | | SDG | PH207 | PH204 | PH185 | PH185 | PH189 | PH189 | PH195 | PH207 | PH189 | PH199 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0183 | 0.0264 | 0.0171 U | 0.0139 J Z | 0.0170 U | 0.0155 J Z | 0.0161 J Z | 0.0183 | 0.0197 | 0.0143 J Z |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | FDG2-SL-1175-SA5A-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/28/2014 | 05/27/2014 | 05/22/2014 | 06/16/2014 |
| | | | SDG | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 | PH204 | PH201 | PH195 | PH234 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2 |
| | | | End Depth | | | | | | | | | | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0161 U | 0.0624 | 0.0160 U | 0.0165 U | 0.0459 | 0.0163 U | 0.0153 J Z | 0.0163 U | 0.0409 | 0.0197 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | FDG-SL-511-SA5C-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SL-569-SA6-TR-2.5 | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 06/16/2014 | 05/08/2014 | 05/28/2014 | 05/20/2014 | 05/20/2014 | 05/28/2014 | 05/28/2014 | 05/28/2014 |
| | | | SDG | PH193 | PH234 | PH173 | PH204 | PH189 | PH189 | PH204 | PH204 | PH204 |
| | | | Start Depth | 2 | 2 | 2 | 2 | 2 | 2.5 | 3 | 3 | 3 |
| | | | End Depth | 3 | 3 | 3 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0164 U | 0.0206 | 0.0170 | 0.0202 | 0.0172 U | 0.0159 J Z | 0.0301 | 0.0122 J Z | 0.0168 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-581-NBZ-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/27/2014 | 05/23/2014 | 05/27/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/20/2014 |
| | | | SDG | PH201 | PH199 | PH201 | PH188 | PH196 | PH193 | PH193 | PH188 |
| | | | Start Depth | 3 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | | | | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0171 U | 0.0173 U | 0.0163 U | 0.0124 J Z | 0.0178 U | 0.0165 U | 0.0123 J Z | 0.0118 J Z |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG-SL-748-SA5C-SB-4.0-5.0 | FDG-SL-757-SA5C-SB-4.0-5.0 | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/11/2014 | 05/12/2014 | 05/14/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 |
| | | | SDG | PH229 | PH175 | PH177 | PH177 | PH177 | PH158 | PH159 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0189 | 0.0169 J Z | 0.0575 | 0.0203 | 0.0174 | 0.0181 U | 0.0182 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH158 | PH159 | PH207 | PH185 | PH185 | PH207 | PH189 | PH217 | PH209 | PH212 |
| | | | Start Depth | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | End Depth | 5 | 5 | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0182 U | 0.0129 J Z | 0.0186 | 0.0167 U | 0.0127 J Z | 0.0210 | 0.0120 J Z | 0.0103 J Z | 0.0165 U | 0.0163 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | FDG2-SL-631-SA8-SB-7.0-8.0 |
| | | | Sample Type | N | N | N | FD | FD | N | N | N | N | N |
| | | | Sample Date | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 | 05/20/2014 | 05/22/2014 | 06/05/2014 |
| | | | SDG | PH217 | PH192 | PH201 | PH185 | PH209 | PH195 | PH195 | PH189 | PH195 | PH220 |
| | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5.5 | 5.5 | 6 | 6 | 7 |
| | | | End Depth | | | | | | | | | | 8 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0171 U | 0.0174 U | 0.0165 U | 0.0125 J Z | 0.0166 U | 0.0123 J FD, Z | 0.0230 J FD | 0.0189 | 0.313 | 0.0161 J Z |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-840-SA5B-SB-7.0-8.0 | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | FDG-SL-757-SA5C-SB-8.0-9.0 | SL-699-SA5B-TR-8.0 | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/14/2014 | 05/28/2014 | 05/22/2014 | 05/21/2014 |
| | | | SDG | PH158 | PH159 | PH207 | PH199 | PH177 | PH204 | PH196 | PH193 |
| | | | Start Depth | 7 | 7 | 7.5 | 7.5 | 8 | 8 | 9 | 9 |
| | | | End Depth | 8 | 8 | | | 9 | | 10 | 10 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0190 U | 0.0180 | 0.0109 J Z | 0.0174 U | 0.0173 U | 0.0171 U | 0.0182 U | 0.0164 U |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-839-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 | SL-529-SA5B-TR-11.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/22/2014 | 05/14/2014 | 01/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 | 05/20/2014 | 05/28/2014 |
| | | | | SDG | PH196 | PH177 | PH159 | PH185 | PH207 | PH209 | PH212 | PH189 | PH204 |
| | | | | Start Depth | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10.5 | 11 |
| | | | | End Depth | 10 | 10 | 10 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0176 U | 0.0175 U | 0.0195 | 0.0163 J Z | 0.0643 | 0.0124 J Z | 0.0169 U | 0.0124 J Z | 0.0224 |

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Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 | FDG-SL-756-SA5C-SB-15.0-16.0 | FDG-SL-836-SA5B-SB-15.0-16.0 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/13/2014 | 05/13/2014 |
| | | | SDG | PH192 | PH188 | PH196 | PH193 | PH196 | PH176 | PH176 |
| | | | Start Depth | 11 | 12 | 13 | 14 | 14 | 15 | 15 |
| | | | End Depth | | 13 | 14 | 15 | 15 | 16 | 16 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0166 U | 0.0114 J Z | 0.0173 J Z | 0.0169 U | 0.0170 U | 0.0136 J Z | 0.0128 J Z |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 | SL-839-SA5B-SB-15.5-16.5 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
| | | | Sample Type | N | N | N | N | N |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 01/14/2014 | 05/21/2014 | 05/13/2014 |
| | | | SDG | PH209 | PH212 | PH159 | PH193 | PH176 |
| | | | Start Depth | 15 | 15 | 15.5 | 19 | 19 |
| | | | End Depth | | | 16.5 | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | |
| 7471B | 7439-97-6 | Mercury | mg/kg | 0.0160 J Z | 0.0168 U | 0.0193 U | 0.0166 U | 0.0122 J Z |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-564-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 | 06/10/2014 |
| | | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 | PH227 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | | 15700 J E | 11500 J E | 13300 | 9960 | 6530 | 6760 | 14900 |
| 6010C | 7439-89-6 | Iron | mg/kg | | 21600 | 22800 | 20700 | 17600 | 30300 | 12000 | 21300 |
| 6010C | 7439-92-1 | Lead | mg/kg | | 9.97 | 5.83 | 9.06 J Q, E | 6.10 | 9.95 J Q, E | 4.97 J Q, E | 11.2 |
| 6010C | 7439-93-2 | Lithium | mg/kg | | 33.2 | 29.3 | 28.3 | 23.6 | 15.4 | 15.4 | 22.4 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | | 4570 J E | 5750 J E | 5010 | 4340 | 2670 | 2920 | 5450 |
| 6010C | 7439-96-5 | Manganese | mg/kg | | 387 | 312 | 262 | 224 | 146 | 141 | 353 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | | 0.661 J Z | 0.287 J Z | 1.96 U | 2.00 U | 10.7 | 0.184 J Z | 0.298 J Z |
| 6010C | 7440-02-0 | Nickel | mg/kg | | 14.4 J E | 10.4 J E | 12.3 | 8.50 | 5.17 | 4.86 | 12.9 |
| 6010C | 7440-09-7 | Potassium | mg/kg | | 4310 J E | 2660 J E | 3700 | 3000 | 1740 | 1970 | 3170 |
| 6010C | 7440-23-5 | Sodium | mg/kg | | 80.3 J Z | 91.5 J Z | 132 | 111 | 119 J Z | 121 | 73.1 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | | 10.2 U B | 10.1 U B | 9.79 U B | 10.0 U B | 12.3 U B | 9.87 U B | 10.1 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | | 1030 | 1090 | 943 | 794 | 591 | 585 | 1120 |
| 6010C | 7440-36-0 | Antimony | mg/kg | | 4.08 UJ Q | 4.06 UJ Q | 3.92 UJ Q | 4.01 U | 4.91 UJ Q | 3.95 UJ Q | 4.03 U |
| 6010C | 7440-38-2 | Arsenic | mg/kg | | 3.91 J Z | 3.52 J Z | 7.53 | 3.11 J Z | 28.9 | 3.74 J Z | 6.44 |
| 6010C | 7440-39-3 | Barium | mg/kg | | 106 J E | 75.1 J E | 60.2 | 59.4 | 39.2 | 44.8 | 86.3 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | | 0.672 J Z | 0.504 J Z | 0.567 J Z | 0.373 J Z | 0.453 J Z | 0.281 J Z | 0.580 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | | 8.75 J Z | 6.92 J Z | 9.79 U B | 6.03 J Z | 12.3 U B | 9.87 U B | 10.1 U B |
| 6010C | 7440-43-9 | Cadmium | mg/kg | | 0.356 J Z | 0.220 J Z | 0.979 U | 0.445 J Z | 1.23 U | 0.987 U | 1.01 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | | 19.2 | 17.1 | 19.5 | 18.2 | 8.11 | 13.2 | 21.7 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | | 5.60 | 5.16 | 5.45 | 4.10 | 2.44 | 2.74 | 5.13 |
| 6010C | 7440-50-8 | Copper | mg/kg | | 9.55 | 8.15 | 11.4 | 7.78 | 10.1 | 5.23 | 9.70 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | | 36.3 | 35.7 | 34.3 | 25.3 | 33.9 | 20.1 | 42.2 |
| 6010C | 7440-66-6 | Zinc | mg/kg | | 62.2 | 56.1 | 63.4 | 59.0 | 55.1 | 32.4 | 54.1 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | | 5.10 U F | 5.07 U F | 4.89 U F | 5.01 U F | 6.13 U F | 4.94 U F | 5.04 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | | 3950 J E | 3110 J E | 4480 | 3420 | 3970 | 3030 | 3610 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | | 421 | 470 | 445 | 396 | 353 | 255 | 382 |
| 6020A | 7440-22-4 | Silver | mg/kg | | 0.0524 J Z | 0.0329 J Z | 0.0581 J Q, Z | 0.0287 J Z | 0.245 U | 0.197 U | 0.0534 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | | 27.2 J E, Q | 14.3 J E, Q | 29.0 J Q, E | 20.3 | 20.9 J Q, E | 21.4 J Q, E | 22.9 |
| 6020A | 7440-28-0 | Thallium | mg/kg | | 0.277 J Q | 0.248 J Q | 0.282 | 0.198 J Z | 0.151 J Z | 0.167 J Z | 0.225 |
| 6020A | 7782-49-2 | Selenium | mg/kg | | 0.351 J Z | 0.344 J Z | 0.368 J Z | 0.117 J Z | 1.04 | 0.171 J Z | 0.459 |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-566-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-574-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 | 06/12/2014 | 06/18/2014 |
| | | | | SDG | PH227 | PH227 | PH235 | PH235 | PH231 | PH231 | PH237 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 13300 | 10500 | 13200 | 12800 | 11700 | 19800 | 21900 |
| 6010C | 7439-89-6 | Iron | mg/kg | 21800 | 16600 | 19500 | 21300 | 18400 | 21100 | 28600 |
| 6010C | 7439-92-1 | Lead | mg/kg | 11.1 | 13.8 | 13.9 | 23.6 | 13.2 J Q, E | 8.27 J Q, E | 20.5 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 25.9 | 19.2 | 22.9 | 25.7 | 24.4 | 23.7 | 30.2 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 6380 | 4040 | 4250 | 5170 | 4570 | 3930 | 6010 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 321 | 230 | 346 | 345 | 269 | 291 | 428 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 0.345 J Z | 0.382 J Z | 2.03 U F | 2.11 U F | 0.180 J Z | 0.387 J Z | 2.05 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | 12.6 | 8.64 | 8.77 | 11.5 | 9.84 | 10.8 | 14.0 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 2870 | 2840 | 3630 J Q | 4070 J Q | 2990 | 3410 | 5720 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | 77.3 J Z | 60.0 J Z | 66.8 J Z | 79.9 J Z | 51.8 J Z | 93.0 J Z | 86.7 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.80 U B | 9.76 U B | 10.2 U B | 10.6 U B | 9.80 U B | 9.89 U B | 10.3 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1200 | 855 | 909 | 1010 | 947 | 1010 | 1090 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.92 U | 3.90 U | 4.07 UJ Q | 4.23 UJ Q | 3.92 UJ Q | 3.96 UJ Q | 4.10 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 6.75 | 6.31 | 6.95 | 13.0 | 11.6 | 9.17 | 3.96 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 65.9 | 61.1 | 91.9 | 99.0 | 68.7 | 94.0 | 132 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.519 J Z | 0.436 J Z | 0.548 J Z | 0.535 J Z | 0.505 J Z | 0.795 J Z | 0.886 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 9.80 U B | 9.76 U B | 3.75 J Z | 10.6 U F | 9.80 U B | 9.89 U B | 10.3 U |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.980 U | 0.976 U | 1.02 U | 1.06 U | 0.980 U | 0.989 U | 1.03 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | 21.6 | 14.2 | 14.3 | 16.9 | 15.5 | 16.8 | 21.6 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 5.33 | 3.66 | 6.34 J E | 5.59 J E | 4.33 | 4.76 | 7.56 J E |
| 6010C | 7440-50-8 | Copper | mg/kg | 9.70 | 7.59 | 10.9 | 12.4 | 7.50 | 8.37 | 15.8 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 43.8 | 31.3 | 30.1 | 30.8 | 30.3 | 35.6 | 41.9 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 55.2 | 50.4 | 57.9 | 75.3 | 52.6 | 48.3 | 86.0 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 4.90 U F | 4.88 U F | 5.08 U F | 5.29 U F | 4.90 U F | 4.95 U F | 5.13 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | 3510 | 3220 | 5720 J E | 5850 J E | 2670 | 2170 | 4700 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 409 | 322 | 409 J E | 489 J E | 354 | 243 | 509 J E |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0588 J Z | 0.571 | 0.0264 J Q, E, Z | 0.0410 J Q, E, Z | 0.0306 J Q, Z | 0.0382 J Q, Z | 0.0517 J Q, E, Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 16.0 | 19.4 | 34.9 J E | 29.6 J E | 16.3 J Q, E | 26.2 J Q, E | 34.1 J E |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.266 | 0.243 | 0.284 J Q, E | 0.273 J Q, E | 0.258 | 0.347 | 0.355 J Q, E |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.426 | 0.324 J Z | 0.200 J Q, Z | 0.151 J Q, Z | 0.337 J Z | 0.451 | 0.240 J Q, Z |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-575-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 | FDG2-SL-581-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | FD |
| | | | | Sample Date | 06/18/2014 | 05/22/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 06/09/2014 |
| | | | | SDG | PH237 | PH196 | PH196 | PH193 | PH193 | PH193 | PH224 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | | 10900 | 26800 | 26700 | 16600 J E | 16300 J E | 21200 J E | 15600 J E |
| 6010C | 7439-89-6 | Iron | mg/kg | | 17800 | 36900 | 36600 | 22900 J E | 20100 J E | 33100 J E | 22500 |
| 6010C | 7439-92-1 | Lead | mg/kg | | 11.8 | 12.2 | 12.0 | 17.2 J E | 12.0 J E | 9.26 J E | 12.5 |
| 6010C | 7439-93-2 | Lithium | mg/kg | | 24.8 | 41.4 | 45.0 | 28.6 | 22.1 | 30.5 | 34.0 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | | 3810 | 7340 | 8620 | 5050 | 4300 | 5690 | 4760 J E |
| 6010C | 7439-96-5 | Manganese | mg/kg | | 266 | 239 | 423 | 323 J E | 218 J E | 407 J E | 403 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | | 2.01 U | 0.544 J Z | 0.318 J Z | 0.348 J Z | 0.424 J Z | 0.800 J Z | 0.453 J Z |
| 6010C | 7440-02-0 | Nickel | mg/kg | | 7.30 | 13.8 | 19.1 | 17.4 J A | 14.0 J A | 21.6 J A | 14.8 J E |
| 6010C | 7440-09-7 | Potassium | mg/kg | | 3390 J Q | 2460 | 4900 | 3650 J Q | 3600 J Q | 4530 J Q | 4500 J E |
| 6010C | 7440-23-5 | Sodium | mg/kg | | 58.4 J Z | 156 | 119 | 101 J Z | 91.2 J Z | 111 | 81.5 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | | 10.1 U B | 10.5 U B | 10.3 U B | 10.5 U B | 10.6 U B | 10.3 U B | 9.91 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | | 843 | 1230 | 1680 | 1030 | 1030 | 1220 | 1060 |
| 6010C | 7440-36-0 | Antimony | mg/kg | | 4.03 UJ Q | 4.21 U | 4.10 U | 4.19 UJ Q, E | 4.23 UJ Q, E | 4.14 UJ Q, E | 3.96 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | | 4.03 U B | 9.59 | 11.7 | 7.07 | 6.33 | 9.90 | 4.19 |
| 6010C | 7440-39-3 | Barium | mg/kg | | 73.3 | 112 | 114 | 97.4 J Q | 93.9 J Q | 124 J Q | 111 J E |
| 6010C | 7440-41-7 | Beryllium | mg/kg | | 0.411 J Z | 1.38 | 1.33 | 0.638 J Z | 0.593 J Z | 0.909 J Z | 0.674 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | | 10.1 U F | 10.5 U B | 10.6 | 10.5 U B | 10.6 U B | 10.3 U B | 9.83 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | | 1.01 U | 0.100 J Z | 0.166 J Z | 1.26 | 0.590 J Z | 0.701 J Z | 0.382 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | | 12.2 | 29.6 | 33.3 | 25.4 J Q | 23.5 J Q | 30.1 J Q | 19.5 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | | 4.12 J E | 6.92 | 10.6 | 6.32 | 5.16 | 9.40 | 5.77 |
| 6010C | 7440-50-8 | Copper | mg/kg | | 8.21 | 18.9 | 21.9 | 37.5 | 16.1 | 18.6 | 10.4 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | | 24.3 | 59.4 | 67.6 | 37.1 J Q | 37.1 J Q | 50.0 J Q | 37.1 |
| 6010C | 7440-66-6 | Zinc | mg/kg | | 53.1 | 88.5 | 99.0 | 148 J Q, E, A | 88.2 J Q, E, A | 81.3 J Q, E, A | 70.8 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | | 5.04 U F | 5.27 U F | 7.09 | 5.24 U F | 5.29 U F | 6.83 | 4.95 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | | 3070 J E | 3590 | 5300 | 7920 | 3210 | 3220 | 4790 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | | 374 J E | 184 | 594 | 483 J Q, A | 350 J Q, A | 576 J Q, A | 480 |
| 6020A | 7440-22-4 | Silver | mg/kg | | 0.0288 J Q, E, Z | 0.211 U | 0.128 J Z | 3.33 | 0.372 J FD | 0.207 U | 0.0691 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | | 15.2 J E | 21.3 | 23.8 | 42.4 J Q | 24.4 J Q | 27.6 J Q | 32.9 J E, Q |
| 6020A | 7440-28-0 | Thallium | mg/kg | | 0.211 J Q, E | 0.335 | 0.425 | 0.309 | 0.300 | 0.374 | 0.297 J Q |
| 6020A | 7782-49-2 | Selenium | mg/kg | | 0.175 J Q, Z | 0.660 | 0.606 | 0.239 J Z | 0.183 J Z | 0.243 J Z | 0.361 J Z |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-874-SA5A-SB-0.0-0.5 | FDG2-SL-875-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-1049-SA5C-SB-0.0-0.5 | FDG-SL-511-SA5C-SB-0.0-0.5 | FDG-SL-748-SA5C-SB-0.0-0.5 | FDG-SL-749-SA5C-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | FD | N | N | N |
| | | | | Sample Date | 05/20/2014 | 06/16/2014 | 05/21/2014 | 05/08/2014 | 05/08/2014 | 05/12/2014 | 05/08/2014 |
| | | | | SDG | PH188 | PH234 | PH193 | PH173 | PH173 | PH175 | PH173 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | | 12200 | 12600 | 17900 J E | 13800 | 17200 | 25000 | 13700 |
| 6010C | 7439-89-6 | Iron | mg/kg | | 18700 | 15500 | 23000 J E | 18100 | 23700 | 27600 | 19700 |
| 6010C | 7439-92-1 | Lead | mg/kg | | 4.19 | 13.8 J Q, E | 15.0 J E | 7.07 | 18.4 | 18.0 | 8.82 |
| 6010C | 7439-93-2 | Lithium | mg/kg | | 27.0 | 14.2 | 25.1 | 20.9 | 22.2 | 22.5 | 22.7 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | | 4760 | 3230 | 5130 | 3830 | 4160 | 6100 | 4070 |
| 6010C | 7439-96-5 | Manganese | mg/kg | | 274 | 241 | 290 J E | 256 J E | 387 J E | 431 | 304 J E |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | | 2.08 U | 1.96 U F | 0.331 J Z | 2.07 UJ FD | 0.399 J Z | 2.14 U | 0.442 J FD, Z |
| 6010C | 7440-02-0 | Nickel | mg/kg | | 9.51 | 11.3 | 17.3 J A | 12.4 | 16.1 | 16.5 | 13.4 |
| 6010C | 7440-09-7 | Potassium | mg/kg | | 2900 | 2730 | 4090 J Q | 2160 J Q | 2630 J Q | 4910 | 2330 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | | 107 | 65.1 J Z | 96.9 J Z | 76.4 J Z | 95.9 J Z | 159 | 88.5 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | | 10.4 U B | 9.79 U B | 10.3 U B | 10.4 U B | 10.6 U B | 10.7 U B | 10.1 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | | 1070 | 763 | 1140 | 925 | 907 | 1210 | 972 |
| 6010C | 7440-36-0 | Antimony | mg/kg | | 4.15 UJ Q | 3.92 UJ Q | 4.11 UJ Q, E | 4.15 UJ Q | 4.23 UJ Q | 4.28 U | 4.05 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | | 3.62 J Z | 4.89 | 8.49 | 4.95 | 7.07 | 5.96 | 5.70 |
| 6010C | 7440-39-3 | Barium | mg/kg | | 81.4 J E, Q | 82.7 | 112 J Q | 70.2 | 108 | 122 | 74.6 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | | 0.430 J Z | 0.455 J Z | 0.652 J Z | 0.562 J Z | 0.814 J Z | 0.888 J Z | 0.572 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | | 4.30 J Z | 9.79 U B | 10.3 U B | 10.4 U B, F | 10.6 U B, F | 6.28 J Z | 10.1 U B, F |
| 6010C | 7440-43-9 | Cadmium | mg/kg | | 0.435 J Z | 0.979 U | 0.969 J Z | 1.04 U | 0.403 J Z | 0.305 J Z | 1.01 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | | 17.6 J E | 18.4 | 26.8 J Q | 17.1 J Q | 21.7 J Q | 30.9 | 16.7 J Q |
| 6010C | 7440-48-4 | Cobalt | mg/kg | | 4.62 J A | 4.22 | 6.64 | 4.87 | 7.39 | 9.12 | 4.98 |
| 6010C | 7440-50-8 | Copper | mg/kg | | 6.73 | 9.93 | 26.7 | 10.6 J Q | 25.5 J Q | 20.8 | 11.8 J Q |
| 6010C | 7440-62-2 | Vanadium | mg/kg | | 31.5 | 30.5 | 42.1 J Q | 35.9 | 47.4 | 60.4 | 36.3 |
| 6010C | 7440-66-6 | Zinc | mg/kg | | 52.4 | 49.1 | 111 J Q, E, A | 49.7 J Q, E | 178 J Q, E | 149 | 75.8 J Q, E |
| 6010C | 7440-67-7 | Zirconium | mg/kg | | 5.19 U F | 4.90 U F | 5.14 U F | 3.13 J Z | 3.76 J Z | 5.40 | 3.11 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | | 3680 | 2850 | 3770 | 5940 J FD | 38400 | 26600 | 3330 J FD |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | | 362 J Q | 608 | 448 J Q, A | 259 J Q | 373 J Q | 454 | 274 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | | 0.208 U | 0.0370 J Q, Z | 0.714 J FD | 0.0444 J Z | 0.137 J Z | 0.200 J Z | 0.0300 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | | 15.7 | 25.2 J Q, E | 27.0 J Q | 27.3 J Q, A | 58.4 J Q, A | 79.2 | 28.7 J Q, A |
| 6020A | 7440-28-0 | Thallium | mg/kg | | 0.221 | 0.212 | 0.318 | 0.248 | 0.250 | 0.390 | 0.276 |
| 6020A | 7782-49-2 | Selenium | mg/kg | | 0.415 U | 0.255 J Z | 0.189 J Z | 0.160 J Z | 0.270 J Z | 0.351 J Z | 0.152 J Z |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG-SL-757-SA5C-SB-0.0-0.5 | FDG-SL-798-SA5B-SB-0.0-0.5 | FDG-SL-841-SA5B-SB-0.0-0.5 | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-838-SA5B-SB-0.0-0.5 | SL-839-SA5B-SB-0.0-0.5 | SL-840-SA5B-SB-0.0-0.5 | SL-843-SA5B-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/14/2014 | 05/07/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 |
| | | | | SDG | PH177 | PH172 | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 14200 | 11800 | 16500 | 16100 | 14000 J A | 15600 | 14600 J A | 16200 |
| 6010C | 7439-89-6 | Iron | mg/kg | 21400 | 14700 | 24900 | 19700 | 21300 J A | 23800 | 18200 J A | 29200 |
| 6010C | 7439-92-1 | Lead | mg/kg | 12.4 | 20.1 | 10.7 | 9.44 | 7.98 | 6.80 | 8.44 | 8.47 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 17.3 | 19.0 | 28.5 | 20.1 | 25.3 J A | 27.5 | 17.8 J A | 24.4 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4010 | 3150 | 5300 | 3700 | 4910 J A | 5040 | 3430 J A | 5040 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 333 | 380 J E | 342 | 293 | 324 J A | 361 | 304 J A | 373 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.99 U F | 0.330 J Z | 2.00 U F | 2.04 U F | 2.08 U F | 2.11 U F | 2.11 U F | 2.16 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | 11.5 | 13.6 | 14.2 | 12.8 | 12.2 J A | 13.5 | 11.2 J A | 15.2 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 3090 | 2620 J Q | 2810 | 3260 | 2830 J A | 2890 | 2620 J A | 3580 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 114 | 114 | 213 | 87.1 J Z | 108 | 196 | 141 | 325 |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.96 U B | 10.3 U B | 10.0 U B | 10.2 U B | 10.4 U B | 10.6 U B | 10.6 U B | 10.8 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1230 | 875 | 1320 | 1120 | 1170 J A | 1180 | 1020 J A | 1190 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.99 U | 4.10 UJ Q | 4.00 U | 4.08 U | 4.15 UJ Q | 4.22 UJ Q | 4.23 UJ Q | 4.33 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 0.941 J Z | 5.74 | 3.04 J Z | 5.58 | 4.97 | 4.97 | 4.47 | 6.07 |
| 6010C | 7440-39-3 | Barium | mg/kg | 110 | 70.9 | 93.4 | 91.4 | 89.8 J A | 103 | 99.7 J A | 98.9 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.542 J Z | 0.473 J Z | 0.692 J Z | 0.649 J Z | 0.534 J Z | 0.725 J Z | 0.588 J Z | 0.890 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 9.96 U B, F | 10.3 U B | 10.0 U | 10.2 U B, F | 10.4 U | 1.26 J Z | 1.51 J Z | 10.8 U |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.996 U | 0.450 J Z | 1.00 U | 1.02 U | 1.04 U | 1.06 U | 1.06 U | 1.08 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | 22.1 | 18.7 J Q | 24.5 | 21.2 | 20.0 J A | 21.3 | 17.2 J A | 23.1 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 6.11 | 5.00 | 6.71 | 5.31 | 5.90 | 5.67 | 5.42 | 6.93 |
| 6010C | 7440-50-8 | Copper | mg/kg | 18.8 | 17.6 J Q | 14.6 | 12.9 | 10.7 | 17.9 | 10.3 | 21.6 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 40.7 | 28.4 | 43.3 | 37.9 | 38.9 J A | 39.7 | 31.9 J A | 44.3 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 125 | 157 J Q, E | 61.6 | 54.6 | 55.8 J A | 58.4 | 60.1 J A | 72.1 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 3.41 J Z | 2.32 J Z | 3.31 J Z | 3.48 J Z | 0.890 J Z | 3.38 J Z | 2.07 J Z | 3.78 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2880 | 3520 | 3000 | 2170 | 4010 J E, A | 3870 | 2170 J E, A | 2760 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 399 | 297 J Q | 407 | 441 | 442 J Q, A | 360 | 259 J Q, A | 522 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0508 J Z | 1.31 | 0.0309 J Z | 2.54 | 0.208 U | 0.0715 J Z | 0.0423 J Z | 0.0418 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 26.3 | 25.8 J Q, A | 21.1 | 19.8 | 18.7 | 28.5 J Q, A | 18.4 | 24.5 J Q, A |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.254 | 0.207 | 0.268 | 0.263 | 0.238 | 0.285 | 0.274 | 0.279 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.100 J Z | 0.215 J Z | 0.400 U | 0.408 U | 0.145 J Z | 0.145 J Z | 0.161 J Z | 0.184 J Z |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-503-SA5C-TR-0.5 | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/29/2014 | 05/28/2014 | 05/19/2014 | 05/19/2014 | 05/20/2014 | 05/20/2014 | 05/22/2014 | 05/29/2014 | 05/20/2014 | 05/23/2014 |
| | | | | SDG | PH207 | PH204 | PH185 | PH185 | PH189 | PH189 | PH195 | PH207 | PH189 | PH199 |
| | | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 27000 | 12600 | 16900 | 29200 | 11200 | 13700 | 16700 J Q | 24900 | 21900 | 10300 |
| 6010C | 7439-89-6 | Iron | mg/kg | 27900 J E | 18100 | 22100 | 31500 | 19600 | 20300 | 22200 J Q | 27800 J E | 26700 | 17100 |
| 6010C | 7439-92-1 | Lead | mg/kg | 11.4 | 4.94 | 8.90 J Q | 14.9 J Q | 7.36 J Q | 8.41 J Q | 6.81 | 8.90 | 17.2 J Q | 4.19 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 25.7 | 20.0 | 21.7 | 24.5 | 27.9 | 25.2 | 22.0 | 22.8 | 20.9 | 24.1 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4990 J E | 4180 J E | 5150 | 7060 | 5430 | 4730 | 4120 J Q | 4360 J E | 6980 | 3440 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 428 | 263 | 305 J E | 504 J E | 295 J E | 324 J E | 298 J Q | 472 | 403 J E | 240 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.12 U F | 2.05 U F | 2.07 U | 2.20 U | 2.05 U | 0.243 J Z | 0.347 J Z | 2.07 U F | 2.10 U | 2.00 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 17.0 | 8.89 | 12.2 J A | 20.8 J A | 9.63 J A | 12.1 J A | 10.9 | 13.2 | 17.7 J A | 6.13 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 3370 J Q | 2780 J Q | 2050 J Q | 5930 J Q | 3130 J Q | 3610 J Q | 3120 | 1870 J Q | 6150 J Q | 2840 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 103 J Z | 460 | 105 | 108 J Z | 89.4 J Z | 78.9 J Z | 146 | 114 | 112 | 146 |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.6 U B | 10.3 U B | 10.3 U B | 11.0 U B | 10.2 U B | 10.3 U B | 10.0 U B | 10.3 U B | 10.5 U B | 9.99 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1010 | 933 | 1080 | 1150 | 1100 | 1090 | 1190 J Q | 915 | 1020 | 958 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 4.25 UJ Q | 4.11 UJ Q | 4.13 UJ Q | 4.40 UJ Q | 4.10 UJ Q | 4.13 UJ Q | 4.01 U | 4.14 UJ Q | 4.21 UJ Q | 4.00 U |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 6.42 | 3.56 J Z | 3.16 J Z | 3.58 J Z | 2.20 J Z | 2.22 J Z | 3.34 J Z | 6.61 | 3.28 J Z | 2.91 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 136 | 82.8 | 75.1 | 141 | 79.1 | 99.3 | 98.6 | 131 | 90.0 | 67.9 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 1.11 | 0.513 J Z | 0.589 J Z | 1.02 J Z | 0.474 J Z | 0.571 J Z | 0.725 J Z | 1.05 | 0.714 J Z | 0.380 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 4.11 J Z | 3.58 J Z | 8.29 J Z | 15.5 | 7.06 J Z | 8.14 J Z | 10.0 U B | 10.3 U | 18.0 | 9.99 U B |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 1.06 U | 0.103 J Z | 1.03 UJ Q | 1.10 UJ Q | 1.02 UJ Q | 1.03 UJ Q | 0.264 J Z | 1.03 U | 1.05 UJ Q | 0.428 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 30.2 | 15.8 | 22.5 | 35.6 | 17.0 | 19.7 | 19.3 | 24.8 | 30.9 | 11.5 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 8.54 | 4.42 | 5.69 J E | 10.7 J E | 5.08 J E | 5.79 J E | 4.96 J E | 12.4 | 8.21 J E | 3.62 |
| 6010C | 7440-50-8 | Copper | mg/kg | 12.7 | 8.36 | 18.5 | 21.7 | 10.7 | 12.9 | 8.86 | 8.74 | 20.5 | 5.60 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 56.1 | 29.8 | 41.4 | 64.4 | 33.7 | 35.5 | 37.2 | 50.3 | 54.4 | 24.0 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 53.4 | 67.2 | 51.7 | 74.6 | 57.2 | 57.8 | 210 J E | 46.6 | 78.3 | 63.8 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 5.31 U F | 5.13 U F | 5.17 U F | 6.62 | 5.12 U F | 5.16 U F | 5.01 U F | 5.17 U F | 5.67 | 4.99 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | 3880 J E | 6820 J E | 35700 J E | 15400 J E | 4170 J E | 2760 J E | 2540 J Q | 3980 J E | 53400 J E | 2600 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 224 J Q, E | 389 J Q, E | 339 | 418 | 413 | 496 | 302 | 148 J Q, E | 669 | 302 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0728 J Z | 0.0437 J Z | 0.0442 J Z | 0.0623 J Z | 0.205 U | 0.0617 J Z | 0.0415 J Z | 0.0583 J Z | 0.0335 J Z | 0.200 U |
| 6020A | 7440-24-6 | Strontium | mg/kg | 37.8 | 27.7 | 52.7 | 47.1 | 14.0 | 19.5 | 19.6 | 36.0 | 108 | 11.2 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.327 | 0.207 | 0.317 | 0.351 | 0.196 J Z | 0.301 | 0.260 | 0.295 | 0.311 | 0.264 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.226 J Z | 0.164 J Z | 0.117 J Z | 0.178 J Z | 0.410 U | 0.154 J Z | 0.219 J Z | 0.164 J Z | 0.287 J Z | 0.400 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | FDG2-SL-1175-SA5A-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N | FD |
| | | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/28/2014 | 05/27/2014 | 05/22/2014 | 06/16/2014 |
| | | | | SDG | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 | PH204 | PH201 | PH195 | PH234 |
| | | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2 |
| | | | | End Depth | | | | | | | | | | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 13900 | 17800 | 14600 | 19000 | 14000 | 18300 | 16500 | 17600 | 13700 J Q | 14600 |
| 6010C | 7439-89-6 | Iron | mg/kg | 21100 | 22500 | 20400 | 23100 | 17500 | 24300 | 22700 | 24600 | 18700 J Q | 18600 |
| 6010C | 7439-92-1 | Lead | mg/kg | 9.58 | 7.17 | 4.91 | 9.94 | 23.4 | 7.53 | 10.0 | 9.32 | 16.2 | 13.1 J Q, E |
| 6010C | 7439-93-2 | Lithium | mg/kg | 23.2 | 22.8 | 24.3 | 20.6 | 19.6 | 22.2 | 22.6 | 26.0 | 19.5 | 19.9 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4760 | 5070 J E | 4940 | 4400 | 3830 | 4910 | 4390 J E | 5370 | 4100 J Q | 4010 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 277 | 345 | 274 | 337 | 389 | 354 | 308 | 370 | 295 J Q | 306 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 0.205 J Z | 2.04 U F | 0.223 J Z | 0.466 J Z | 0.396 J Z | 2.00 U F | 1.98 U F | 1.97 U F | 0.455 J Z | 1.99 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | 9.58 | 12.0 | 9.96 | 12.4 | 12.6 | 14.8 | 15.2 | 13.7 | 9.71 | 11.7 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 3640 | 3920 J Q | 3400 | 2970 | 3590 | 4350 | 3730 J Q | 4720 | 3660 | 3440 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 68.9 J Z | 76.3 J Z | 67.8 J Z | 84.0 J Z | 71.2 J Z | 93.0 J Z | 103 | 97.2 J Z | 83.0 J Z | 76.3 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.74 U B | 10.2 U B | 10.1 U B | 10.2 U B | 10.1 U B | 9.98 U B | 9.90 U B | 9.83 U B | 10.0 U B | 9.95 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1210 | 1170 | 1150 | 1050 | 1000 | 1300 | 1090 | 1270 | 1130 J Q | 1000 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.90 UJ Q | 4.09 UJ Q | 4.04 U | 4.09 UJ Q | 4.05 U | 3.99 U | 3.96 UJ Q | 3.93 U | 4.02 U | 3.98 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 2.19 J Z | 4.28 | 3.24 J Z | 2.39 J Z | 3.11 J Z | 5.03 | 4.77 | 4.40 | 3.09 J Z | 5.50 |
| 6010C | 7440-39-3 | Barium | mg/kg | 88.9 | 96.8 | 84.2 | 109 | 106 | 137 | 112 | 126 | 98.4 | 96.4 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.518 J Z | 0.703 J Z | 0.568 J Z | 0.743 J Z | 0.502 J Z | 0.909 J Z | 0.839 J Z | 0.825 J Z | 0.628 J Z | 0.548 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 4.90 J Z | 1.78 J Z | 6.14 J Z | 8.10 J Z | 5.22 J Z | 9.98 U B | 11.4 | 9.83 U B | 10.0 U B | 9.95 U B |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.228 J Z | 1.02 U | 1.01 U B | 0.301 J Z | 0.817 J Z | 0.324 J Z | 0.150 J Z | 0.240 J Z | 0.697 J Z | 0.995 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | 17.3 | 20.8 | 17.0 | 21.8 | 19.6 | 25.0 | 22.8 | 23.7 | 18.0 | 18.4 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 4.99 | 7.09 | 4.93 | 6.35 | 5.15 | 6.41 | 6.66 | 6.28 | 4.73 J E | 4.77 |
| 6010C | 7440-50-8 | Copper | mg/kg | 7.46 | 9.27 | 7.61 | 10.2 | 14.4 | 14.5 | 13.3 | 13.8 | 11.0 | 11.5 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 33.9 | 40.7 | 34.2 | 41.3 | 32.6 | 44.6 | 38.7 | 41.5 | 34.2 | 32.5 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 59.3 | 60.2 | 58.0 | 52.2 | 146 | 62.2 | 91.6 | 73.7 | 123 J E | 57.5 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 4.87 U F | 5.11 U F | 5.05 U F | 5.11 U F | 5.07 U F | 4.99 U F | 4.95 U F | 4.91 U F | 5.02 U F | 4.97 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2790 | 3530 J E | 2760 | 3380 | 2340 | 2950 | 2020 J E | 3120 | 2600 J Q | 2090 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 463 | 447 J Q, E | 463 | 244 | 398 | 412 | 421 J Q, E | 620 | 341 | 467 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.195 U | 0.204 U | 0.202 U | 0.0397 J Z | 0.133 J Z | 0.0459 J Z | 0.0356 J Z | 0.308 | 2.47 | 0.0426 J Q, Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 16.3 J A | 22.4 | 15.8 | 23.0 J A | 20.5 | 26.9 | 18.3 | 23.1 | 17.9 | 19.8 J Q, E |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.295 | 0.329 | 0.277 | 0.306 | 0.268 | 0.340 | 0.302 | 0.262 | 0.233 | 0.284 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.271 J Z | 0.167 J Z | 0.305 J Z | 0.306 J Z | 0.157 J Z | 0.389 J Z | 0.247 J Z | 0.274 J Z | 0.237 J Z | 0.268 J Z |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | FDG-SL-511-SA5C-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SL-569-SA6-TR-2.5 | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/21/2014 | 06/16/2014 | 05/08/2014 | 05/28/2014 | 05/20/2014 | 05/20/2014 | 05/28/2014 | 05/28/2014 | 05/28/2014 |
| | | | | SDG | PH193 | PH234 | PH173 | PH204 | PH189 | PH189 | PH204 | PH204 | PH204 |
| | | | | Start Depth | 2 | 2 | 2 | 2 | 2 | 2.5 | 3 | 3 | 3 |
| | | | | End Depth | 3 | 3 | 3 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | | 12300 J E | 15500 | 8420 | 15400 | 15500 | 21000 | 15000 | 15700 | 23200 |
| 6010C | 7439-89-6 | Iron | mg/kg | | 19000 J E | 19400 | 12400 | 19600 | 19700 | 21600 | 20100 | 18400 | 28500 |
| 6010C | 7439-92-1 | Lead | mg/kg | | 2.99 J E, Z | 10.7 J Q, E | 13.0 | 5.90 | 7.33 J Q | 8.23 J Q | 5.53 | 6.24 | 8.98 |
| 6010C | 7439-93-2 | Lithium | mg/kg | | 23.0 | 20.7 | 11.3 | 23.2 | 21.4 | 26.9 | 24.5 | 17.6 | 30.1 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | | 5110 | 4140 | 3350 | 4060 J E | 4050 | 4430 | 4580 J E | 3750 J E | 5560 J E |
| 6010C | 7439-96-5 | Manganese | mg/kg | | 239 J E | 321 | 377 J E | 261 | 440 J E | 268 J E | 274 | 223 | 441 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | | 0.174 J Z | 2.02 U F | 0.209 J Z | 2.15 U F | 0.447 J Z | 0.467 J Z | 2.08 U F | 2.06 U F | 2.11 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | | 21.1 J A | 13.1 | 10.8 | 10.2 | 12.4 J A | 11.2 J A | 9.80 | 10.3 | 17.5 |
| 6010C | 7440-09-7 | Potassium | mg/kg | | 2630 J Q | 3650 | 1290 J Q | 3010 J Q | 3700 J Q | 2200 J Q | 3050 J Q | 2270 J Q | 3240 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | | 101 | 78.1 J Z | 64.9 J Z | 142 | 79.9 J Z | 90.7 J Z | 252 | 86.8 J Z | 136 |
| 6010C | 7440-31-5 | Tin | mg/kg | | 10.0 U B | 10.1 U B | 10.2 U B | 10.7 U B | 10.1 U B | 10.3 U B | 10.4 U B | 10.3 U B | 10.6 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | | 1150 | 1070 | 535 | 1040 | 1110 | 1120 | 1060 | 858 | 1270 |
| 6010C | 7440-36-0 | Antimony | mg/kg | | 4.00 UJ Q, E | 4.03 UJ Q | 4.08 UJ Q | 4.29 UJ Q | 4.05 UJ Q | 4.11 UJ Q | 4.16 UJ Q | 4.11 UJ Q | 4.22 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | | 5.75 | 5.84 | 4.58 | 5.10 | 2.24 J Z | 2.83 J Z | 4.31 | 4.82 | 5.80 |
| 6010C | 7440-39-3 | Barium | mg/kg | | 84.5 J Q | 107 | 61.1 | 82.7 | 118 | 95.9 | 90.3 | 92.3 | 142 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | | 0.313 J Z | 0.581 J Z | 0.400 J Z | 0.662 J Z | 0.628 J Z | 0.817 J Z | 0.631 J Z | 0.664 J Z | 1.11 |
| 6010C | 7440-42-8 | Boron | mg/kg | | 10.0 U B | 10.1 U B | 10.2 U B, F | 2.98 J Z | 8.13 J Z | 7.65 J Z | 0.940 J Z | 3.13 J Z | 5.26 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | | 0.458 J Z | 1.01 U | 0.247 J Z | 1.07 U | 1.01 UJ Q | 1.03 UJ Q | 1.04 U | 1.03 U | 1.06 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | | 28.0 J Q | 19.5 | 11.9 J Q | 17.2 | 19.3 | 21.6 | 17.6 | 18.8 | 27.7 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | | 6.11 | 4.91 | 7.57 | 4.98 | 5.76 J E | 5.67 J E | 5.10 | 4.88 | 7.27 |
| 6010C | 7440-50-8 | Copper | mg/kg | | 10.3 | 11.9 | 10.2 J Q | 8.33 | 13.9 | 9.78 | 7.81 | 8.93 | 12.9 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | | 40.9 J Q | 36.0 | 27.3 | 34.7 | 35.6 | 42.3 | 35.3 | 35.1 | 51.9 |
| 6010C | 7440-66-6 | Zinc | mg/kg | | 54.2 J Q, E, A | 58.7 | 90.6 J Q, E | 119 | 57.4 | 46.0 | 63.8 | 40.6 | 86.4 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | | 5.00 U F | 5.04 U F | 2.15 J Z | 5.36 U F | 5.07 U F | 5.13 U F | 5.20 U F | 5.14 U F | 5.28 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | | 2920 | 2270 | 17600 | 2390 J E | 2110 J E | 2120 J E | 4250 J E | 2390 J E | 2910 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | | 439 J Q, A | 436 | 210 J Q | 334 J Q, E | 360 | 212 | 351 J Q, E | 254 J Q, E | 308 J Q, E |
| 6020A | 7440-22-4 | Silver | mg/kg | | 0.200 U | 0.0425 J Q, Z | 0.0375 J Z | 0.215 U | 0.0513 J Z | 0.0509 J Z | 0.0532 J Z | 0.206 U | 0.0581 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | | 19.0 J Q | 22.6 J Q, E | 26.7 J Q, A | 17.4 | 26.2 | 17.6 | 21.6 | 26.7 | 26.5 |
| 6020A | 7440-28-0 | Thallium | mg/kg | | 0.268 | 0.274 | 0.126 J Z | 0.268 | 0.362 | 0.246 | 0.305 | 0.208 | 0.314 |
| 6020A | 7782-49-2 | Selenium | mg/kg | | 0.400 U | 0.272 J Z | 0.127 J Z | 0.126 J Z | 0.126 J Z | 0.155 J Z | 0.130 J Z | 0.148 J Z | 0.175 J Z |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-581-NBZ-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/27/2014 | 05/23/2014 | 05/27/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/20/2014 |
| | | | | SDG | PH201 | PH199 | PH201 | PH188 | PH196 | PH193 | PH193 | PH188 |
| | | | | Start Depth | 3 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 |
| | | | | End Depth | | | | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 23000 | 14500 | 25200 | 14900 | 30600 | 15400 J E | 23900 J E | 16200 |
| 6010C | 7439-89-6 | Iron | mg/kg | 26000 | 19300 | 27500 | 20100 | 40900 | 21700 J E | 38900 J E | 20000 |
| 6010C | 7439-92-1 | Lead | mg/kg | 6.52 | 5.23 | 7.66 | 5.67 | 14.3 | 2.56 J E, Z | 9.63 J E | 7.41 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 30.3 | 20.0 | 26.7 | 23.1 | 40.4 | 29.9 | 48.5 | 23.3 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 5810 | 4090 | 5280 | 4420 | 8320 | 4440 | 8650 | 4540 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 364 | 338 | 357 | 367 | 475 | 456 J E | 310 J E | 313 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.99 U F | 0.329 J Z | 2.04 U F | 0.277 J FD, Z | 0.437 J Z | 2.11 U | 2.22 U | 0.474 J FD, Z |
| 6010C | 7440-02-0 | Nickel | mg/kg | 14.3 | 11.7 | 15.8 | 11.0 | 19.8 | 15.6 J A | 32.9 J A | 11.9 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 3250 | 4110 | 2810 | 3450 | 5260 | 2240 J Q | 2300 J Q | 3470 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 123 | 273 | 125 | 104 | 289 | 145 | 793 | 119 |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.97 U B | 10.3 U B | 10.2 U B | 10.4 U B | 10.7 U B | 10.5 U B | 11.1 U B | 10.8 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1350 | 1080 | 1380 | 1100 | 1540 | 1140 | 1180 | 1160 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.99 U | 4.13 U | 4.08 U | 4.18 UJ Q | 4.29 U | 4.21 UJ Q, E | 4.44 UJ Q, E | 4.30 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 5.04 | 3.49 J Z | 6.52 | 3.84 J Z | 10.4 | 9.61 | 11.7 | 4.42 |
| 6010C | 7440-39-3 | Barium | mg/kg | 112 | 111 | 136 | 106 J FD, E, Q | 137 | 82.1 J Q | 136 J Q | 247 J FD, E, Q |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.987 J Z | 0.565 J Z | 1.17 | 0.529 J Z | 1.50 | 0.449 J Z | 1.15 | 0.604 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 9.97 U B | 4.61 J Z | 10.2 U B | 4.55 J Z | 10.5 J Z | 10.5 U B | 11.1 U B | 7.29 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.128 J Z | 0.590 J Z | 0.178 J Z | 0.565 J Z | 0.261 J Z | 0.490 J Z | 0.763 J Z | 0.590 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 25.0 | 19.3 | 28.7 | 18.4 J E | 32.6 | 22.6 J Q | 42.3 J Q | 22.0 J E |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 6.33 | 5.81 | 6.69 | 5.58 J A | 12.9 | 5.93 | 9.69 | 5.61 J A |
| 6010C | 7440-50-8 | Copper | mg/kg | 12.4 | 11.2 | 11.6 | 10.0 | 21.1 | 11.3 | 26.0 | 11.0 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 48.7 | 33.9 | 53.0 | 34.8 | 70.7 | 33.3 J Q | 56.1 J Q | 37.5 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 61.4 | 57.3 | 60.5 | 57.4 | 98.2 | 51.0 J Q, E, A | 94.1 J Q, E, A | 60.5 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 4.99 U F | 5.17 U F | 5.10 U F | 5.22 U F | 6.94 | 5.27 U F | 9.12 | 5.38 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2910 | 2620 | 2960 | 3440 | 4620 | 3010 | 17000 | 3140 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 482 | 382 | 243 | 412 J Q | 447 | 390 J Q, A | 672 J Q, A | 400 J Q |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0347 J Z | 0.0338 J Z | 0.0610 J Z | 0.209 UJ FD | 0.0997 J Z | 0.211 U | 0.584 | 0.0297 J FD, Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 21.1 | 24.3 | 24.1 | 21.4 | 29.2 | 22.9 J Q | 62.2 J Q | 24.5 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.278 | 0.325 | 0.280 | 0.289 | 0.515 | 0.293 | 0.363 | 0.275 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.272 J Z | 0.141 J Z | 0.267 J Z | 0.161 J Z | 0.672 | 0.165 J Z | 0.294 J Z | 0.148 J Z |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG-SL-748-SA5C-SB-4.0-5.0 | FDG-SL-757-SA5C-SB-4.0-5.0 | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/11/2014 | 05/12/2014 | 05/14/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 |
| | | | | SDG | PH229 | PH175 | PH177 | PH177 | PH177 | PH158 | PH159 |
| | | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | | 15800 | 17300 | 16100 | 16000 | 18500 | 16400 J A | 15800 |
| 6010C | 7439-89-6 | Iron | mg/kg | | 18600 | 21000 | 21400 | 22400 | 27700 | 20300 J A | 22200 |
| 6010C | 7439-92-1 | Lead | mg/kg | | 7.29 J Q, E | 8.49 | 9.62 | 9.82 | 14.1 | 7.81 | 6.13 |
| 6010C | 7439-93-2 | Lithium | mg/kg | | 26.4 | 21.9 | 17.5 | 23.2 | 43.9 | 21.4 J A | 26.6 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | | 4510 | 4500 | 4160 | 4660 | 7700 | 4070 J A | 4750 |
| 6010C | 7439-96-5 | Manganese | mg/kg | | 290 | 250 | 315 | 322 | 343 | 271 J A | 319 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | | 0.417 J Z | 2.14 U | 0.686 J Z | 0.412 J Z | 0.877 J Z | 2.20 UJ F, FD | 2.18 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | | 12.8 | 14.0 | 10.0 | 14.7 | 22.5 | 10.8 J A | 12.5 |
| 6010C | 7440-09-7 | Potassium | mg/kg | | 3180 | 2400 | 3010 | 3340 | 2400 | 2330 J A | 2770 |
| 6010C | 7440-23-5 | Sodium | mg/kg | | 80.1 J Z | 84.9 J Z | 130 | 165 | 243 | 148 | 175 |
| 6010C | 7440-31-5 | Tin | mg/kg | | 10.3 U B | 10.7 U B | 10.7 U B | 10.7 U B | 10.3 U B | 11.0 U B | 10.9 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | | 1070 | 1010 | 1230 | 1250 | 1400 | 1150 J A | 1220 |
| 6010C | 7440-36-0 | Antimony | mg/kg | | 4.11 UJ Q | 4.28 U | 4.29 U | 4.30 U | 4.13 U | 4.39 UJ Q | 4.36 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | | 7.05 | 4.58 | 1.24 J Z | 2.99 J Z | 35.4 | 5.05 | 4.40 |
| 6010C | 7440-39-3 | Barium | mg/kg | | 92.5 | 72.5 | 120 | 103 | 91.5 | 108 J A | 99.0 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | | 0.588 J Z | 0.633 J Z | 0.552 J Z | 0.645 J Z | 0.880 J Z | 0.610 J Z | 0.712 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | | 10.3 U B | 10.7 U B, F | 10.7 U | 10.7 U B | 10.3 U | 1.17 J Z | 1.66 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | | 1.03 U | 1.07 U | 1.07 U | 1.07 U | 1.03 U | 1.10 U | 1.09 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | | 21.2 | 28.3 | 20.0 | 24.6 | 39.6 | 19.3 J A | 24.4 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | | 4.78 | 4.57 | 6.74 | 6.85 | 6.68 | 4.50 | 5.36 |
| 6010C | 7440-50-8 | Copper | mg/kg | | 9.95 | 12.8 | 16.5 | 15.5 | 18.8 | 9.30 | 17.3 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | | 33.8 | 35.3 | 43.8 | 41.1 | 43.9 | 37.5 J A | 38.9 |
| 6010C | 7440-66-6 | Zinc | mg/kg | | 54.4 | 54.5 | 112 | 57.4 | 65.4 | 47.0 J A | 55.6 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | | 5.14 U F | 3.13 J Z | 2.94 J Z | 3.52 J Z | 3.63 J Z | 1.89 J Z | 3.37 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | | 2340 | 5130 | 3860 | 2370 | 6280 | 4330 J FD, E, A | 3510 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | | 480 | 257 | 489 | 361 | 450 | 227 J Q, A | 345 |
| 6020A | 7440-22-4 | Silver | mg/kg | | 0.0779 J Q, Z | 0.187 J Z | 0.0618 J Z | 0.0287 J Z | 1.10 | 0.0415 J Z | 0.0355 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | | 19.9 J Q, E | 31.7 | 32.6 | 21.4 | 38.1 | 23.2 | 24.3 J Q, A |
| 6020A | 7440-28-0 | Thallium | mg/kg | | 0.241 | 0.286 | 0.273 | 0.261 | 0.291 | 0.245 | 0.260 |
| 6020A | 7782-49-2 | Selenium | mg/kg | | 0.229 J Z | 0.193 J Z | 0.429 U | 0.430 U | 0.413 U | 0.141 J Z | 0.436 UJ FD |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 |
| | | | | SDG | PH158 | PH159 | PH207 | PH185 | PH185 | PH207 | PH189 | PH217 | PH209 | PH212 |
| | | | | Start Depth | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | | End Depth | 5 | 5 | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 17800 J A | 21100 | 24800 | 13400 | 29100 | 20900 | 24700 | 27200 | 9500 | 12800 |
| 6010C | 7439-89-6 | Iron | mg/kg | 21100 J A | 29800 | 27600 J E | 21800 | 31900 | 25900 J E | 30700 | 24000 | 16200 | 16900 |
| 6010C | 7439-92-1 | Lead | mg/kg | 7.82 | 8.79 | 7.55 | 7.98 J Q | 13.1 J Q | 9.38 | 12.8 J Q | 8.50 | 4.95 | 4.28 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 22.5 J A | 31.4 | 29.6 | 20.4 | 26.2 | 21.3 | 25.8 | 22.4 | 22.4 | 21.1 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4000 J A | 6790 | 5720 J E | 5290 | 7090 | 4790 J E | 7260 | 5230 | 3340 J E | 3640 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 206 J A | 325 | 338 | 313 J E | 261 J E | 268 | 411 J E | 226 | 248 | 235 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.19 U F | 2.25 U F | 2.13 U | 2.12 U | 2.27 U | 2.10 U | 2.11 U | 2.09 U | 2.08 UJ F, FD | 0.192 J Z |
| 6010C | 7440-02-0 | Nickel | mg/kg | 11.3 J A | 18.4 | 17.3 | 11.2 J A | 17.1 J A | 13.0 | 18.9 J A | 9.18 | 5.79 | 6.90 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 1760 J A | 2490 | 1950 J Q | 1610 J Q | 2740 J Q | 2580 J Q | 5590 J Q | 3120 | 2840 J Q | 2730 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 78.5 J Z | 1890 | 552 | 356 | 163 | 257 | 93.4 J Z | 102 J Z | 71.3 J Z | 68.6 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | 11.0 U B | 11.3 U B | 10.6 U B | 10.6 U B | 11.3 U B | 10.5 U B | 10.6 U B | 10.4 U B | 10.4 U B | 10.3 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1150 J A | 1240 | 981 | 1110 | 1020 | 1030 | 1060 | 1440 | 878 | 950 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 4.38 UJ Q | 4.51 UJ Q | 4.25 UJ Q | 4.24 UJ Q | 4.53 UJ Q | 4.19 UJ Q | 4.22 UJ Q | 4.18 UJ Q | 4.15 UJ Q | 4.11 U |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 5.25 | 6.22 | 6.90 | 4.24 U B | 2.92 J Z | 6.62 | 4.22 U B | 1.66 J Z | 3.17 J Z | 3.11 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 117 J A | 107 | 133 | 66.8 | 123 | 101 | 112 | 98.7 | 60.7 | 73.4 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.671 J Z | 1.01 J Z | 0.976 J Z | 0.505 J Z | 1.00 J Z | 0.935 J Z | 0.837 J Z | 0.923 J Z | 0.448 J Z | 0.529 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 0.927 J Z | 3.71 J Z | 3.55 J Z | 6.99 J Z | 12.6 | 3.87 J Z | 15.4 | 5.47 J Z | 1.75 J Z | 7.53 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 1.10 U | 1.13 U | 1.06 U | 1.06 UJ Q | 1.13 UJ Q | 1.05 U | 1.06 UJ Q | 1.04 U B | 1.04 U | 1.03 U B |
| 6010C | 7440-47-3 | Chromium | mg/kg | 21.2 J A | 28.9 | 28.2 | 20.6 | 35.4 | 23.5 | 32.9 | 19.0 | 9.38 | 12.8 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 3.77 | 7.02 | 9.42 | 5.58 J E | 7.01 J E | 5.78 | 9.63 J E | 5.15 | 3.45 | 4.11 |
| 6010C | 7440-50-8 | Copper | mg/kg | 9.74 | 23.8 | 9.76 | 11.8 | 19.1 | 18.7 | 21.0 | 6.20 | 4.42 | 5.23 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 39.8 J A | 50.1 | 55.0 | 36.1 | 61.7 | 47.4 | 60.1 | 38.1 | 20.9 | 27.8 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 46.3 J A | 65.1 | 48.6 | 51.2 | 64.4 | 57.0 | 75.9 | 55.3 | 56.7 | 51.0 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 1.87 J Z | 4.02 J Z | 5.31 U F | 5.29 U F | 6.04 | 5.24 U F | 5.73 | 5.22 U F | 5.19 U F | 5.14 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2900 J E, A | 11800 | 4420 J E | 5600 J E | 18000 J FD, E | 4760 J E | 30500 J E | 2200 | 2130 J E | 1880 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 142 J Q, A | 199 | 200 J Q, E | 361 | 240 | 260 J Q, E | 536 | 234 | 334 J Q, E | 262 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0545 J Z | 0.0956 J Z | 0.0707 J Z | 0.0298 J Z | 0.0496 J Z | 0.0312 J Z | 0.0429 J Z | 0.0389 J Z | 0.208 U | 0.206 U |
| 6020A | 7440-24-6 | Strontium | mg/kg | 25.5 | 68.8 J Q, A | 37.2 | 17.3 | 47.7 | 28.9 | 65.1 | 25.0 J A | 9.45 | 16.6 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.270 | 0.320 | 0.213 | 0.227 | 0.316 | 0.275 | 0.363 | 0.269 | 0.227 | 0.270 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.123 J Z | 0.130 J Z | 0.425 U | 0.424 U | 0.453 U | 0.156 J Z | 0.255 J Z | 0.264 J Z | 0.415 UJ FD | 0.262 J Z |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | FDG2-SL-631-SA8-SB-7.0-8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | FD | N | N | N | N | N |
| | | | | Sample Date | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 | 05/20/2014 | 05/22/2014 | 06/05/2014 |
| | | | | SDG | PH217 | PH192 | PH201 | PH185 | PH209 | PH195 | PH195 | PH189 | PH195 | PH220 |
| | | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5.5 | 5.5 | 6 | 6 | 7 |
| | | | | End Depth | | | | | | | | | | 8 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 10100 | 23000 | 19400 | 27300 | 12300 | 19600 J Q | 22000 J Q | 21900 | 21500 J Q | 26600 |
| 6010C | 7439-89-6 | Iron | mg/kg | 17300 | 25000 | 23000 | 29300 | 18400 | 22900 J Q | 23500 J Q | 25600 | 25000 J Q | 29600 |
| 6010C | 7439-92-1 | Lead | mg/kg | 6.97 | 6.76 | 6.95 | 11.3 J Q | 5.64 | 5.45 | 6.55 | 9.18 J Q | 5.70 | 12.1 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 21.8 | 27.4 | 22.5 | 24.5 | 23.5 | 26.3 | 28.1 | 30.2 | 22.5 | 26.3 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 3350 | 5050 | 4810 | 6420 | 3660 J E | 4210 J Q | 4300 J Q | 5120 | 4940 J Q | 5770 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 217 | 317 | 287 | 260 J E | 272 | 261 J Q | 228 J Q | 249 J E | 195 J Q | 312 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 1.97 U | 0.413 J Z | 0.347 J Z | 2.19 U | 2.01 UJ F, FD | 0.599 J Z | 0.472 J Z | 0.322 J Z | 0.516 J Z | 2.40 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 5.42 | 12.3 | 12.2 | 15.5 J A | 7.18 | 10.7 | 11.7 | 13.1 J A | 9.84 | 15.6 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 2800 | 2030 | 2840 | 2600 J Q | 2910 J Q | 2190 | 2240 | 1680 J Q | 1950 | 3000 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 134 | 111 | 193 | 154 | 71.2 J Z | 147 | 159 | 116 | 118 | 710 |
| 6010C | 7440-31-5 | Tin | mg/kg | 9.84 U B | 10.6 U B | 10.3 U B | 10.9 U B | 10.1 U B | 10.8 U B | 10.9 U B | 10.6 U B | 10.7 U B | 12.0 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 909 | 1270 | 1250 | 1020 | 943 | 1140 J Q | 1180 J Q | 1290 | 1410 J Q | 1110 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 3.94 UJ Q | 4.22 U | 4.11 U | 4.38 UJ Q | 4.02 UJ Q | 4.32 U | 4.36 U | 4.23 UJ Q | 4.29 U | 4.80 U |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 1.72 J Z | 5.64 | 5.08 | 2.99 J Z | 3.57 J Z | 4.32 | 5.26 | 3.03 J Z | 5.45 | 4.09 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | 62.1 | 104 | 111 | 112 | 71.2 | 94.0 | 98.0 | 111 | 103 | 148 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.443 J Z | 0.911 J Z | 0.898 J Z | 0.873 J Z | 0.559 J Z | 0.836 J Z | 0.948 J Z | 0.887 J Z | 1.03 J Z | 0.911 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 4.67 J Z | 4.95 J Z | 10.3 U B | 12.9 | 1.62 J Z | 10.8 U B | 10.9 U B | 8.53 J Z | 10.7 U B | 11.1 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.984 U B | 0.561 J Z | 0.128 J Z | 1.09 UJ Q | 1.01 U | 0.193 J Z | 0.262 J Z | 1.06 UJ Q | 1.07 U | 0.380 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | 9.86 | 24.0 | 22.4 | 33.0 | 11.8 | 20.0 | 23.0 | 25.1 | 22.6 | 30.6 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 3.34 | 8.69 | 5.60 | 7.31 J E | 4.04 | 4.69 J E | 4.60 J E | 6.11 J E | 5.57 J E | 7.63 |
| 6010C | 7440-50-8 | Copper | mg/kg | 4.23 | 8.37 | 10.8 | 17.6 | 5.43 | 7.98 | 9.48 | 12.2 | 7.20 | 12.3 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 21.2 | 48.7 | 42.9 | 57.9 | 25.8 | 39.9 | 44.1 | 49.6 | 48.2 | 54.2 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 53.2 | 50.7 | 50.1 | 58.8 | 58.5 | 45.8 J E | 46.4 J E | 52.5 | 42.3 J E | 56.0 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 4.92 U F | 5.28 U F | 5.14 U F | 5.60 | 5.03 U F | 5.40 U F | 5.45 U F | 5.28 U F | 5.36 U F | 5.77 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 2350 | 2400 | 2840 | 46300 J FD, E | 2320 J E | 2560 J Q | 2810 J Q | 2550 J E | 2390 J Q | 34900 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 281 | 220 | 269 | 239 | 318 J Q, E | 226 | 258 | 193 | 126 | 171 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.197 U | 0.0617 J Z | 0.0448 J Z | 0.0509 J Z | 0.201 U | 0.0419 J Z | 0.0434 J Z | 0.0847 J Z | 0.0418 J Z | 0.0633 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 14.2 J A | 27.1 | 26.0 | 53.9 | 14.7 | 21.4 | 21.9 | 28.4 | 23.1 | 71.6 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.265 | 0.302 | 0.245 | 0.322 | 0.263 | 0.242 | 0.240 | 0.275 | 0.281 | 0.315 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.261 J Z | 0.135 J Z | 0.273 J Z | 0.438 U | 0.143 J FD, Z | 0.209 J Z | 0.238 J Z | 0.423 U | 0.313 J Z | 0.288 J Z |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-840-SA5B-SB-7.0-8.0 | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | FDG-SL-757-SA5C-SB-8.0-9.0 | SL-699-SA5B-TR-8.0 | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/14/2014 | 05/28/2014 | 05/22/2014 | 05/21/2014 |
| | | | | SDG | PH158 | PH159 | PH207 | PH199 | PH177 | PH204 | PH196 | PH193 |
| | | | | Start Depth | 7 | 7 | 7.5 | 7.5 | 8 | 8 | 9 | 9 |
| | | | | End Depth | 8 | 8 | | | 9 | | 10 | 10 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | | 16300 J A | 15400 | 13000 | 20000 | 11800 | 18400 | 29400 | 15400 J E |
| 6010C | 7439-89-6 | Iron | mg/kg | | 27600 J A | 24100 | 21700 J E | 30400 | 16100 | 25400 | 60400 | 21600 J E |
| 6010C | 7439-92-1 | Lead | mg/kg | | 9.81 | 6.99 | 3.51 | 9.08 | 6.28 | 6.90 | 18.9 | 4.67 J E |
| 6010C | 7439-93-2 | Lithium | mg/kg | | 31.0 J A | 30.4 | 25.0 | 38.7 | 21.4 | 31.8 | 49.5 | 22.4 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | | 5880 J A | 4920 | 6070 J E | 6790 | 3460 | 5660 J E | 9500 | 4170 |
| 6010C | 7439-96-5 | Manganese | mg/kg | | 257 J A | 334 | 268 | 666 | 681 | 233 | 335 | 298 J E |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | | 2.26 U F | 2.20 U F | 2.03 U | 0.261 J Z | 2.05 U | 2.10 U F | 0.457 J Z | 0.453 J Z |
| 6010C | 7440-02-0 | Nickel | mg/kg | | 14.2 J A | 14.0 | 19.1 | 20.2 | 13.3 | 12.8 | 19.4 | 9.20 J A |
| 6010C | 7440-09-7 | Potassium | mg/kg | | 1820 J A | 2010 | 2300 J Q | 2680 | 1340 | 2240 J Q | 4590 | 2820 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | | 72.8 J Z | 1130 | 514 | 122 | 89.9 J Z | 142 | 658 | 80.4 J Z |
| 6010C | 7440-31-5 | Tin | mg/kg | | 11.3 U B | 11.0 U B | 10.2 U B | 10.5 U B | 10.3 U B | 10.5 U B | 11.2 U B | 10.3 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | | 1300 J A | 1070 | 1180 | 1260 | 955 | 1220 | 1560 | 756 |
| 6010C | 7440-36-0 | Antimony | mg/kg | | 4.52 UJ Q | 4.41 UJ Q | 4.07 UJ Q | 4.20 U | 4.10 U | 4.20 UJ Q | 4.49 U | 4.13 UJ Q, E |
| 6010C | 7440-38-2 | Arsenic | mg/kg | | 8.60 | 5.42 | 8.02 | 9.15 | 2.61 J Z | 6.38 | 14.4 | 8.12 |
| 6010C | 7440-39-3 | Barium | mg/kg | | 98.3 J A | 80.4 | 66.9 | 121 | 84.0 | 85.4 | 164 | 68.4 J Q |
| 6010C | 7440-41-7 | Beryllium | mg/kg | | 0.697 J Z | 0.765 J Z | 0.541 J Z | 0.915 J Z | 0.415 J Z | 0.826 J Z | 2.19 | 0.598 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | | 11.3 U | 1.10 J Z | 0.959 J Z | 6.78 J Z | 10.3 U | 1.23 J Z | 11.4 | 10.3 U B |
| 6010C | 7440-43-9 | Cadmium | mg/kg | | 1.13 U | 1.10 U | 1.02 U | 0.711 J Z | 1.03 U | 1.05 U | 1.12 U | 0.463 J Z |
| 6010C | 7440-47-3 | Chromium | mg/kg | | 24.6 J A | 21.9 | 28.4 | 33.4 | 18.6 | 25.6 | 37.7 | 16.1 J Q |
| 6010C | 7440-48-4 | Cobalt | mg/kg | | 6.11 | 6.53 | 6.04 | 11.7 | 4.50 | 5.95 | 9.35 | 5.63 |
| 6010C | 7440-50-8 | Copper | mg/kg | | 16.4 | 18.2 | 10.6 | 16.7 | 11.7 | 12.7 | 29.8 | 8.83 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | | 49.3 J A | 40.7 | 44.9 | 55.5 | 28.8 | 45.5 | 78.8 | 32.5 J Q |
| 6010C | 7440-66-6 | Zinc | mg/kg | | 65.0 J A | 58.1 | 54.7 | 72.1 | 40.9 | 55.3 | 120 | 53.1 J Q, E, A |
| 6010C | 7440-67-7 | Zirconium | mg/kg | | 1.04 J Z | 3.43 J Z | 5.08 U F | 5.26 U F | 3.14 J Z | 5.25 U F | 8.27 | 5.16 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | | 4570 J E, A | 2510 | 7750 J E | 4310 | 2350 | 2700 J E | 3990 | 8130 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | | 499 J Q, A | 274 | 629 J Q, E | 449 | 269 | 216 J Q, E | 714 | 252 J Q, A |
| 6020A | 7440-22-4 | Silver | mg/kg | | 0.226 U | 0.0573 J Z | 0.0271 J Z | 0.0811 J Z | 0.0594 J Z | 0.0668 J Z | 0.0426 J Z | 0.206 U |
| 6020A | 7440-24-6 | Strontium | mg/kg | | 28.8 | 19.0 J Q, A | 30.1 | 26.2 | 21.0 | 23.1 | 22.7 | 26.8 J Q |
| 6020A | 7440-28-0 | Thallium | mg/kg | | 0.294 | 0.243 | 0.271 | 0.341 | 0.236 | 0.290 | 0.524 | 0.289 |
| 6020A | 7782-49-2 | Selenium | mg/kg | | 0.157 J Z | 0.441 U | 0.407 U | 0.129 J Z | 0.410 U | 0.420 U | 0.980 | 0.413 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-839-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 | SL-529-SA5B-TR-11.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/22/2014 | 05/14/2014 | 01/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 | 05/20/2014 | 05/28/2014 |
| | | | | SDG | PH196 | PH177 | PH159 | PH185 | PH207 | PH209 | PH212 | PH189 | PH204 |
| | | | | Start Depth | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10.5 | 11 |
| | | | | End Depth | 10 | 10 | 10 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | | 21900 | 30300 | 15200 | 22900 | 24200 | 16500 | 17200 | 27100 | 11300 |
| 6010C | 7439-89-6 | Iron | mg/kg | | 28100 | 53000 | 24200 | 25700 | 19500 J E | 20500 | 19600 | 31800 | 16500 |
| 6010C | 7439-92-1 | Lead | mg/kg | | 7.92 | 24.4 | 7.03 | 10.0 J Q | 5.06 | 6.64 | 5.12 | 13.3 J Q | 3.93 |
| 6010C | 7439-93-2 | Lithium | mg/kg | | 25.1 | 69.2 | 28.7 | 25.8 | 23.1 | 21.8 | 21.4 | 29.7 | 19.7 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | | 6390 | 11900 | 5320 | 5460 | 4380 J E | 4150 J E | 3730 | 7670 | 3530 J E |
| 6010C | 7439-96-5 | Manganese | mg/kg | | 400 | 461 | 324 | 308 J E | 278 | 293 | 210 | 392 J E | 215 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | | 0.334 J Z | 0.295 J Z | 2.16 U F | 2.22 U | 2.20 U F | 2.06 U F | 0.186 J Z | 2.20 U | 2.19 U F |
| 6010C | 7440-02-0 | Nickel | mg/kg | | 15.2 | 24.9 | 25.1 | 16.1 J A | 10.8 | 10.5 | 8.57 | 19.2 J A | 6.68 |
| 6010C | 7440-09-7 | Potassium | mg/kg | | 3800 | 4480 | 2900 | 2360 J Q | 1980 J Q | 3110 J Q | 1750 | 4280 J Q | 2490 J Q |
| 6010C | 7440-23-5 | Sodium | mg/kg | | 112 | 1440 | 195 | 129 | 129 | 169 | 138 | 116 | 169 |
| 6010C | 7440-31-5 | Tin | mg/kg | | 10.6 U B | 10.6 U B | 10.8 U B | 11.1 U B | 11.0 U B | 10.3 U B | 10.2 U B | 11.0 U B | 10.9 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | | 1100 | 2170 | 1170 | 1090 | 1120 | 963 | 969 | 1190 | 889 |
| 6010C | 7440-36-0 | Antimony | mg/kg | | 4.22 U | 4.25 U | 4.32 UJ Q | 4.45 UJ Q | 4.39 UJ Q | 4.12 UJ Q | 4.06 U | 4.39 UJ Q | 4.38 UJ Q |
| 6010C | 7440-38-2 | Arsenic | mg/kg | | 6.90 | 4.07 J Z | 4.74 | 3.82 J Z | 4.02 J Z | 4.29 | 3.14 J Z | 2.45 J Z | 3.13 J Z |
| 6010C | 7440-39-3 | Barium | mg/kg | | 88.8 | 182 | 98.2 | 93.0 | 96.8 | 103 | 82.3 | 110 | 66.4 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | | 0.959 J Z | 1.75 | 0.730 J Z | 0.822 J Z | 0.913 J Z | 0.683 J Z | 0.684 J Z | 0.878 J Z | 0.478 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | | 10.8 | 53.1 U | 1.03 J Z | 10.9 J Z | 1.48 J Z | 2.29 J Z | 7.17 J Z | 16.3 | 3.29 J Z |
| 6010C | 7440-43-9 | Cadmium | mg/kg | | 0.339 J Z | 1.06 U | 1.08 U | 1.11 UJ Q | 1.10 U | 1.03 U | 1.02 U B | 1.10 UJ Q | 1.09 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | | 28.9 | 37.9 | 36.5 | 27.0 | 17.5 | 18.1 | 15.7 | 35.9 | 11.8 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | | 7.68 | 10.5 | 5.78 | 6.40 J E | 5.06 | 4.76 | 4.77 | 9.55 J E | 3.53 |
| 6010C | 7440-50-8 | Copper | mg/kg | | 15.7 | 34.6 | 18.7 | 14.7 | 7.16 | 9.03 | 5.66 | 20.6 | 5.59 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | | 53.6 | 73.8 | 40.3 | 50.0 | 36.4 | 34.2 | 34.1 | 66.2 | 25.4 |
| 6010C | 7440-66-6 | Zinc | mg/kg | | 67.3 | 126 | 63.8 | 57.1 | 44.6 | 56.2 | 40.7 | 75.0 | 51.6 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | | 5.28 U F | 4.51 J Z | 3.22 J Z | 5.56 U F | 5.49 U F | 5.15 U F | 5.08 U F | 6.78 | 5.47 U F |
| 6010C | 7440-70-2 | Calcium | mg/kg | | 18800 | 11000 | 6260 | 27900 J E | 2430 J E | 3240 J E | 2250 | 23500 J E | 2730 J E |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | | 341 | 620 | 404 | 227 | 348 J Q, E | 307 J Q, E | 157 | 370 | 310 J Q, E |
| 6020A | 7440-22-4 | Silver | mg/kg | | 0.0277 J Z | 0.202 J Z | 0.0466 J Z | 0.0543 J Z | 0.0374 J Z | 0.206 U | 0.0305 J Z | 0.0414 J Z | 0.0379 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | | 38.1 | 74.5 | 27.3 J Q, A | 44.9 | 19.4 | 23.9 | 19.6 | 67.8 | 16.5 |
| 6020A | 7440-28-0 | Thallium | mg/kg | | 0.297 | 0.495 | 0.254 | 0.305 | 0.224 | 0.308 | 0.233 | 0.394 | 0.205 J Z |
| 6020A | 7782-49-2 | Selenium | mg/kg | | 0.307 J Z | 0.174 J Z | 0.122 J Z | 0.445 U | 0.439 U | 0.129 J Z | 0.229 J Z | 0.194 J Z | 0.119 J Z |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 | FDG-SL-756-SA5C-SB-15.0-16.0 | FDG-SL-836-SA5B-SB-15.0-16.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/21/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/13/2014 | 05/13/2014 |
| | | | | SDG | PH192 | PH188 | PH196 | PH193 | PH196 | PH176 | PH176 |
| | | | | Start Depth | 11 | 12 | 13 | 14 | 14 | 15 | 15 |
| | | | | End Depth | | 13 | 14 | 15 | 15 | 16 | 16 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 17400 | 14000 | 28100 | 17200 J E | 18600 | 17500 | 31500 |
| 6010C | 7439-89-6 | Iron | mg/kg | 20700 | 25200 | 42100 | 22800 J E | 26200 | 18400 | 33100 |
| 6010C | 7439-92-1 | Lead | mg/kg | 5.05 | 5.34 | 17.8 | 4.74 J E | 7.02 | 7.08 | 13.8 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 22.1 | 23.2 | 67.7 | 22.6 | 26.2 | 19.9 | 27.9 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4170 | 5520 | 11000 | 4880 | 6180 | 3240 | 7830 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 167 | 188 | 487 | 378 J E | 408 | 215 | 490 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.05 U | 0.206 J Z | 0.320 J Z | 0.396 J Z | 0.479 J Z | 0.455 J Z | 2.24 U |
| 6010C | 7440-02-0 | Nickel | mg/kg | 6.62 | 9.40 | 26.5 | 10.6 J A | 14.3 | 7.66 | 18.8 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 1630 | 2590 | 4940 | 3280 J Q | 3920 | 1710 | 3840 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 125 | 123 | 512 | 252 | 265 | 119 | 230 |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.3 U B | 10.2 U B | 10.8 U B | 10.6 U B | 10.3 U B | 10.7 U B | 11.2 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 1130 | 1260 | 1710 | 892 | 1190 | 888 | 1240 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 4.11 U | 4.10 UJ Q | 4.30 U | 4.26 UJ Q, E | 4.13 U | 4.30 U | 4.48 U |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 3.76 J Z | 7.35 | 12.5 | 6.59 | 7.54 | 4.48 | 5.82 |
| 6010C | 7440-39-3 | Barium | mg/kg | 62.5 | 73.9 J E, Q | 140 | 89.8 J Q | 81.4 | 67.7 | 123 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.585 J Z | 0.540 J Z | 1.63 | 0.616 J Z | 0.857 J Z | 0.762 J Z | 1.00 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 4.31 J Z | 10.2 U B | 10.9 | 10.6 U B | 10.5 | 10.7 U | 11.2 U B |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 0.433 J Z | 0.541 J Z | 0.178 J Z | 0.487 J Z | 0.367 J Z | 1.07 U | 1.12 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | 18.4 | 21.8 J E | 39.2 | 19.3 J Q | 26.2 | 16.1 | 39.6 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 3.32 | 3.96 J A | 12.9 | 6.49 | 7.02 | 4.63 | 11.3 |
| 6010C | 7440-50-8 | Copper | mg/kg | 6.08 | 9.98 | 27.9 | 9.58 | 12.5 | 8.45 | 21.3 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 39.2 | 42.8 | 76.1 | 38.6 J Q | 50.2 | 33.9 | 72.1 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 39.6 | 57.1 | 124 | 54.6 J Q, E, A | 66.0 | 40.3 | 72.7 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 5.13 U F | 5.12 U F | 9.28 | 5.32 U F | 5.16 U F | 3.05 J Z | 6.81 |
| 6010C | 7440-70-2 | Calcium | mg/kg | 1860 | 3300 | 5260 | 6050 | 17000 | 1850 | 24100 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 137 | 412 J Q | 776 | 295 J Q, A | 398 | 179 | 367 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0462 J Z | 0.205 U | 0.191 J Z | 0.0306 J Z | 0.0359 J Z | 0.0374 J Z | 0.0598 J Z |
| 6020A | 7440-24-6 | Strontium | mg/kg | 19.8 | 19.3 | 23.1 | 31.9 J Q | 35.6 | 17.1 | 52.2 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.258 | 0.294 | 0.430 | 0.280 | 0.287 | 0.282 | 0.439 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.411 U | 0.150 J Z | 0.784 | 0.426 U | 0.273 J Z | 0.221 J Z | 0.268 J Z |

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Trench samples collected at a discrete interval.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 | SL-839-SA5B-SB-15.5-16.5 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
| | | | Sample Type | N | N | N | N | N |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 01/14/2014 | 05/21/2014 | 05/13/2014 |
| | | | SDG | PH209 | PH212 | PH159 | PH193 | PH176 |
| | | | Start Depth | 15 | 15 | 15.5 | 19 | 19 |
| | | | End Depth | | | 16.5 | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | |
| 6010C | 7429-90-5 | Aluminum | mg/kg | 15600 | 17200 | 10800 | 13000 J E | 13000 |
| 6010C | 7439-89-6 | Iron | mg/kg | 19500 | 23900 | 19500 | 20000 J E | 19400 |
| 6010C | 7439-92-1 | Lead | mg/kg | 4.94 | 7.61 | 4.50 | 2.96 J E, Z | 7.17 |
| 6010C | 7439-93-2 | Lithium | mg/kg | 20.9 | 25.5 | 22.6 | 22.5 | 23.0 |
| 6010C | 7439-95-4 | Magnesium | mg/kg | 4140 J E | 4690 | 5200 | 4360 | 4770 |
| 6010C | 7439-96-5 | Manganese | mg/kg | 275 | 349 | 265 | 275 J E | 265 |
| 6010C | 7439-98-7 | Molybdenum | mg/kg | 2.03 U F | 0.262 J Z | 2.23 U F | 0.339 J Z | 0.775 J Z |
| 6010C | 7440-02-0 | Nickel | mg/kg | 9.66 | 12.9 | 12.1 | 7.06 J A | 8.66 |
| 6010C | 7440-09-7 | Potassium | mg/kg | 2820 J Q | 4690 | 2700 | 3010 J Q | 2820 |
| 6010C | 7440-23-5 | Sodium | mg/kg | 160 | 167 | 463 | 278 | 150 |
| 6010C | 7440-31-5 | Tin | mg/kg | 10.2 U B | 10.2 U B | 11.2 U B | 10.2 U B | 10.1 U B |
| 6010C | 7440-32-6 | Titanium | mg/kg | 945 | 1070 | 1110 | 911 | 1050 |
| 6010C | 7440-36-0 | Antimony | mg/kg | 4.07 UJ Q | 4.09 U | 4.47 UJ Q | 4.10 UJ Q, E | 4.02 U |
| 6010C | 7440-38-2 | Arsenic | mg/kg | 4.39 | 4.32 | 3.37 J Z | 5.81 | 4.02 U B |
| 6010C | 7440-39-3 | Barium | mg/kg | 78.0 | 111 | 84.2 | 55.5 J Q | 84.8 |
| 6010C | 7440-41-7 | Beryllium | mg/kg | 0.651 J Z | 0.696 J Z | 0.462 J Z | 0.457 J Z | 0.482 J Z |
| 6010C | 7440-42-8 | Boron | mg/kg | 4.80 J Z | 8.69 J Z | 1.98 J Z | 10.2 U B | 10.1 U B |
| 6010C | 7440-43-9 | Cadmium | mg/kg | 1.02 U | 0.302 J Z | 1.12 U | 0.454 J Z | 1.01 U |
| 6010C | 7440-47-3 | Chromium | mg/kg | 16.7 | 21.0 | 16.5 | 13.9 J Q | 18.6 |
| 6010C | 7440-48-4 | Cobalt | mg/kg | 4.66 | 5.94 | 4.28 | 4.47 | 5.04 |
| 6010C | 7440-50-8 | Copper | mg/kg | 7.40 | 12.2 | 16.1 | 6.49 | 10.9 |
| 6010C | 7440-62-2 | Vanadium | mg/kg | 34.0 | 39.3 | 37.2 | 30.6 J Q | 33.5 |
| 6010C | 7440-66-6 | Zinc | mg/kg | 49.9 | 69.7 | 61.8 | 48.7 J Q, E, A | 52.8 |
| 6010C | 7440-67-7 | Zirconium | mg/kg | 5.08 U F | 5.11 U F | 4.55 J Z | 5.12 U F | 2.46 J Z |
| 6010C | 7440-70-2 | Calcium | mg/kg | 4390 J E | 2770 | 17000 | 2790 | 3990 |
| 6010C | 7723-14-0 | Phosphorus | mg/kg | 289 J Q, E | 563 | 463 | 224 J Q, A | 375 |
| 6020A | 7440-22-4 | Silver | mg/kg | 0.0296 J Z | 0.0415 J Z | 0.0323 J Z | 0.205 U | 0.201 U |
| 6020A | 7440-24-6 | Strontium | mg/kg | 19.3 | 26.9 | 70.4 J Q, A | 19.2 J Q | 21.0 |
| 6020A | 7440-28-0 | Thallium | mg/kg | 0.274 | 0.388 | 0.188 J Z | 0.259 | 0.269 |
| 6020A | 7782-49-2 | Selenium | mg/kg | 0.122 J Z | 0.351 J Z | 0.447 U | 0.410 U | 0.157 J Z |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-564-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 | 06/10/2014 |
| | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 | PH227 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 1.9 | 1.4 | 2.7 | 2.1 | 19.3 | 2.6 | 1.8 |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-566-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-571-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 | 06/12/2014 | 06/11/2014 |
| | | | SDG | PH227 | PH227 | PH235 | PH235 | PH231 | PH231 | PH229 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 1.9 | 1.5 | 1.6 | 5.4 | 0.98 | 0.89 | 5.3 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-572-NBZ-SB-0.0-0.5 | FDG2-SL-573-NBZ-SB-0.0-0.5 | FDG2-SL-574-NBZ-SB-0.0-0.5 | FDG2-SL-575-NBZ-SB-0.0-0.5 | FDG2-SL-576-NBZ-SB-0.0-0.5 | FDG2-SL-577-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/17/2014 | 06/18/2014 | 06/18/2014 | 06/18/2014 | 06/10/2014 | 06/11/2014 | 05/22/2014 |
| | | | SDG | PH235 | PH237 | PH237 | PH237 | PH227 | PH229 | PH196 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 2.1 | 1.4 | 2.5 | 0.73 | 2.5 | 1.5 | 7.8 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-581-NBZ-SB-0.0-0.5 | FDG2-SL-582-NBZ-SB-0.0-0.5 | FDG2-SL-583-NBZ-SB-0.0-0.5 | FDG2-SL-584-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-NBZ-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/22/2014 | 06/13/2014 | 06/12/2014 | 06/13/2014 | 05/21/2014 | 06/13/2014 | 05/21/2014 |
| | | | SDG | PH196 | PH233 | PH231 | PH233 | PH193 | PH233 | PH193 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.2 | 3.9 | 0.89 | 0.83 | 4.5 | 2.8 | 5.4 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-586-NBZ-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-612-SA5D-SB-0.0-0.5 | FDG2-SL-613-SA5D-SB-0.0-0.5 | FDG2-SL-614-SA5D-SB-0.0-0.5 | FDG2-SL-623-SA8-SB-0.0-0.5 | FDG2-SL-624-SA8-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/13/2014 | 05/21/2014 | 06/10/2014 | 06/10/2014 | 06/10/2014 | 05/21/2014 | 06/05/2014 |
| | | | SDG | PH233 | PH193 | PH227 | PH227 | PH227 | PH193 | PH220 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 2.6 | 4.3 | 2.6 | 3.7 | 2.6 | 8.2 | 1.5 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-625-SA8-SB-0.0-0.5 | FDG2-SL-626-SA8-SB-0.0-0.5 | FDG2-SL-628-SA8-SB-0.0-0.5 | FDG2-SL-629-SA8-SB-0.0-0.5 | FDG2-SL-630-SA8-SB-0.0-0.5 | FDG2-SL-631-SA8-SB-0.0-0.5 | FDG2-SL-632-SA8-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/05/2014 | 06/06/2014 | 05/22/2014 | 06/11/2014 | 06/10/2014 | 06/05/2014 | 06/09/2014 |
| | | | SDG | PH220 | PH221 | PH196 | PH229 | PH227 | PH220 | PH224 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 2.8 | 1.1 | 4.4 | 1.1 | 4.2 | 5.0 | 1.9 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-691-SA6-SB-0.0-0.5 | FDG2-SL-692-SA6-SB-0.0-0.5 | FDG2-SL-693-SA6-SB-0.0-0.5 | FDG2-SL-694-SA6-SB-0.0-0.5 | FDG2-SL-695-SA6-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 | FDG2-SL-874-SA5A-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N |
| | | | Sample Date | 06/06/2014 | 06/06/2014 | 06/06/2014 | 06/11/2014 | 06/11/2014 | 06/09/2014 | 05/20/2014 |
| | | | SDG | PH221 | PH221 | PH221 | PH229 | PH229 | PH224 | PH188 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 0.93 | 1.1 | 0.85 | 0.51 | 0.62 | 2.0 | 5.6 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-875-SA5A-SB-0.0-0.5 | FDG2-SL-876-SA5A-SB-0.0-0.5 | FDG2-SL-877-SA5A-SB-0.0-0.5 | FDG2-SL-878-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-1049-SA5C-SB-0.0-0.5 | FDG-SL-511-SA5C-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | FD | FD | N |
| | | | Sample Date | 06/16/2014 | 06/16/2014 | 06/16/2014 | 06/11/2014 | 05/21/2014 | 05/08/2014 | 05/08/2014 |
| | | | SDG | PH234 | PH234 | PH234 | PH229 | PH193 | PH173 | PH173 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 0.84 | 1.2 | 0.80 | 1.3 | 4.6 | 5.5 | 7.3 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG-SL-748-SA5C-SB-0.0-0.5 | FDG-SL-749-SA5C-SB-0.0-0.5 | FDG-SL-757-SA5C-SB-0.0-0.5 | FDG-SL-798-SA5B-SB-0.0-0.5 | FDG-SL-841-SA5B-SB-0.0-0.5 | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-838-SA5B-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/12/2014 | 05/08/2014 | 05/14/2014 | 05/07/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 |
| | | | SDG | PH175 | PH173 | PH177 | PH172 | PH177 | PH177 | PH158 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.6 | 5.0 | 1.6 | 2.5 | 3.0 | 3.0 | 5.6 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-839-SA5B-SB-0.0-0.5 | SL-840-SA5B-SB-0.0-0.5 | SL-843-SA5B-SB-0.0-0.5 | SL-503-SA5C-TR-0.5 | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 01/14/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/28/2014 | 05/19/2014 | 05/19/2014 | 05/20/2014 | 05/20/2014 | 05/22/2014 |
| | | | SDG | PH159 | PH158 | PH159 | PH207 | PH204 | PH185 | PH185 | PH189 | PH189 | PH195 |
| | | | Start Depth | 0 | 0 | 0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.2 | 6.3 | 10.3 | 5.8 | 4.5 | 4.2 | 9.0 | 2.4 | 3.1 | 3.2 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/29/2014 | 05/20/2014 | 05/23/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/28/2014 |
| | | | SDG | PH207 | PH189 | PH199 | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 | PH204 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.1 | 7.7 | 2.8 | 2.2 | 4.1 | 2.0 | 6.0 | 2.3 | 1.8 | 2.9 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | SVL-501-SA5B-SB-0.75-1.25 | SVL-563-SA5C-SB-1.0-1.5 | SVL-577-SA6-SB-1.0-2.0 | SVL-611-SA5A-SB-1.35-1.85 | SVL-536-SA5B-SB-1.5-2.0 | SVL-538-SA5B-SB-1.5-2.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/27/2014 | 05/22/2014 | 05/12/2014 | 06/02/2014 | 06/11/2014 | 06/09/2014 | 06/11/2014 | 05/15/2014 |
| | | | SDG | PH201 | PH195 | PH174 | PH211 | PH228 | PH223 | PH228 | PH178 |
| | | | Start Depth | 0.5 | 0.5 | 0.75 | 1 | 1 | 1.4 | 1.5 | 1.5 |
| | | | End Depth | | | 1.25 | 1.5 | 2 | 1.9 | 2 | 2 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 1.2 | 2.4 | 9.4 | 7.0 | 5.0 | 3.6 | 2.1 | 8.6 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-552-SA5A-SB-1.5-2.0 | SVL-554-SA5A-SB-1.5-2.0 | SVL-574-SA5A-SB-1.5-2.0 | SVL-630-SA5A-SB-1.5-2.0 | SVL-536-SA5D-SB-1.8-2.3 | FDG2-SL-1175-SA5A-SB-2.0-3.0 | FDG2-SL-576-NBZ-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N |
| | | | Sample Date | 06/05/2014 | 06/05/2014 | 06/04/2014 | 06/09/2014 | 05/23/2014 | 06/16/2014 | 06/10/2014 |
| | | | SDG | PH219 | PH219 | PH216 | PH223 | PH198 | PH234 | PH227 |
| | | | Start Depth | 1.5 | 1.5 | 1.5 | 1.5 | 1.8 | 2 | 2 |
| | | | End Depth | 2 | 2 | 2 | 2 | 2.3 | 3 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.3 | 4.1 | 2.8 | 5.3 | 7.3 | 2.4 | 3.9 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | FDG-SL-511-SA5C-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SVL-504-SA8-SB-2.0-2.5 | SVL-527-SA6-SB-2.0-3.0 | SVL-543-SA5B-SB-2.0-2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 06/16/2014 | 05/08/2014 | 05/28/2014 | 05/20/2014 | 05/16/2014 | 06/09/2014 | 05/14/2014 |
| | | | SDG | PH193 | PH234 | PH173 | PH204 | PH189 | PH181 | PH223 | PH182 |
| | | | Start Depth | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | End Depth | 3 | 3 | 3 | | | 2.5 | 3 | 2.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.8 | 2.7 | 3.9 | 7.7 | 5.1 | 7.4 | 11.0 | 7.6 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-551-SA5C-SB-2.0-2.8 | SVL-566-SA5B-SB-2.0-2.5 | SL-569-SA6-TR-2.5 | SVL-531-SA5C-SB-2.5-2.9 | SVL-559-SA5C-SB-2.5-3.0 | SVL-569-SA5B-SB-2.5-3.0 | SVL-571-SA5A-SB-2.5-3.0 | SVL-576-SA5A-SB-2.5-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/28/2014 | 05/15/2014 | 05/20/2014 | 05/20/2014 | 05/29/2014 | 06/11/2014 | 06/04/2014 | 06/04/2014 |
| | | | SDG | PH203 | PH178 | PH189 | PH186 | PH206 | PH228 | PH216 | PH216 |
| | | | Start Depth | 2 | 2 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| | | | End Depth | 2.8 | 2.5 | | 2.9 | 3 | 3 | 3 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.9 | 2.5 | 5.4 | 8.2 | 9.7 | 3.9 | 2.0 | 2.1 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-582-NBZ-SB-3.0-3.5 | FDG2-SL-877-SA5A-SB-3.0-4.0 | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 | SL-707-SA5B-TR-3.0 | SVL-521-SA5B-SB-3.0-3.5 | SVL-534-SA5B-SB-3.0-3.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/13/2014 | 06/16/2014 | 05/28/2014 | 05/28/2014 | 05/28/2014 | 05/27/2014 | 05/14/2014 | 05/15/2014 |
| | | | SDG | PH233 | PH234 | PH204 | PH204 | PH204 | PH201 | PH182 | PH178 |
| | | | Start Depth | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | | End Depth | 3.5 | 4 | | | | | 3.5 | 3.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 8.7 | 3.0 | 6.6 | 3.7 | 6.2 | 3.6 | 4.3 | 6.4 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-545-SA5C-SB-3.0-3.5 | SVL-557-SA5C-SB-3.0-3.5 | SVL-566-SA5A-SB-3.0-3.5 | SVL-627-SA5A-SB-3.0-3.5 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 | SVL-532-SA8-SB-3.5-4.0 | SVL-586-SA5B-SB-3.75-4.25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/28/2014 | 05/29/2014 | 06/04/2014 | 06/06/2014 | 05/23/2014 | 05/27/2014 | 06/12/2014 | 06/04/2014 |
| | | | SDG | PH203 | PH206 | PH216 | PH222 | PH199 | PH201 | PH230 | PH216 |
| | | | Start Depth | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.75 |
| | | | End Depth | 3.5 | 3.5 | 3.5 | 3.5 | | | 4 | 4.25 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 7.6 | 9.1 | 8.4 | 4.7 | 5.1 | 4.9 | 9.8 | 4.6 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-986-SA5B-SB-3.75-4.25 | SVL-574-SA6-SB-3.8-4.3 | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-581-NBZ-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-623-SA8-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | FD | N | N | N | N | N | N |
| | | | Sample Date | 06/04/2014 | 06/09/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 |
| | | | SDG | PH216 | PH223 | PH188 | PH196 | PH193 | PH193 | PH193 |
| | | | Start Depth | 3.75 | 3.8 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 4.25 | 4.3 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.4 | 4.1 | 7.9 | 9.4 | 5.1 | 12.6 | 6.3 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-626-SA8-SB-4.0-5.0 | FDG2-SL-628-SA8-SB-4.0-5.0 | FDG2-SL-630-SA8-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 | FDG2-SL-876-SA5A-SB-4.0-5.0 | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG2-SL-930-SA8-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/06/2014 | 05/22/2014 | 06/10/2014 | 05/20/2014 | 06/16/2014 | 06/11/2014 | 06/10/2014 |
| | | | SDG | PH221 | PH196 | PH227 | PH188 | PH234 | PH229 | PH227 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 5.2 | 10.3 | 8.5 | 7.0 | 4.3 | 2.7 | 8.8 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG-SL-748-SA5C-SB-4.0-5.0 | FDG-SL-757-SA5C-SB-4.0-5.0 | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/12/2014 | 05/14/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 |
| | | | SDG | PH175 | PH177 | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.5 | 9.5 | 9.6 | 5.1 | 8.9 | 9.2 | 9.6 | 12.1 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-529-SA5A-SB-4.0-4.5 | SVL-532-SA5B-SB-4.0-5.0 | SVL-532-SA5D-SB-4.0-4.5 | SVL-551-SA6-SB-4.0-5.0 | SVL-576-SA5B-SB-4.0-4.3 | SVL-832-SA5B-SB-4.0-5.0 | SVL-546-SA8-SB-4.4-4.9 | SVL-846-SA8-SB-4.4-4.9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | FD | N | N |
| | | | Sample Date | 06/05/2014 | 05/13/2014 | 05/27/2014 | 06/10/2014 | 06/02/2014 | 05/13/2014 | 06/12/2014 | 06/12/2014 |
| | | | SDG | PH219 | PH180 | PH200 | PH226 | PH211 | PH180 | PH230 | PH230 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4.4 | 4.4 |
| | | | End Depth | 4.5 | 5 | 4.5 | 5 | 4.3 | 5 | 4.9 | 4.9 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 4.5 | 8.1 | 5.4 | 9.3 | 4.4 | 7.3 | 4.5 | 4.5 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-631-SA8-SB-4.5-5.0 | SVL-511-SA5D-SB-4.5-5.5 | SVL-524-SA8-SB-4.5-5.5 | SVL-553-SA5D-SB-4.5-5.5 | SVL-556-SA5D-SB-4.5-5.5 | SVL-563-SA5B-SB-4.5-5.0 | SVL-602-SA5B-SB-4.5-5.0 | SVL-811-SA5D-SB-4.5-5.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/05/2014 | 05/22/2014 | 05/19/2014 | 06/03/2014 | 06/03/2014 | 06/11/2014 | 06/03/2014 | 05/22/2014 |
| | | | SDG | PH220 | PH194 | PH183 | PH214 | PH214 | PH228 | PH214 | PH194 |
| | | | Start Depth | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| | | | End Depth | 5 | 5.5 | 5.5 | 5.5 | 5.5 | 5 | 5 | 5.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 8.6 | 11.6 | 12.2 | 12.0 | 10.8 | 6.1 | 5.2 | 11.5 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 |
| | | | SDG | PH207 | PH185 | PH185 | PH207 | PH189 | PH217 | PH209 | PH212 | PH217 | PH192 |
| | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 10.4 | 6.5 | 13.5 | 7.4 | 9.8 | 4.3 | 4.6 | 2.7 | 3.2 | 5.3 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SVL-507-SA5C-SB-5.0-6.0 | SVL-512-SA5D-SB-5.0-6.0 | SVL-515-SA5D-SB-5.0-6.0 | SVL-517-SA8-SB-5.0-6.0 | SVL-525-SA5C-SB-5.0-6.0 | SVL-528-SA8-SB-5.0-6.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | FD | FD | N | N | N | N | N | N |
| | | | Sample Date | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/28/2014 | 05/21/2014 | 05/21/2014 | 05/19/2014 | 05/20/2014 | 05/19/2014 |
| | | | SDG | PH201 | PH185 | PH209 | PH203 | PH190 | PH190 | PH183 | PH186 | PH183 |
| | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | End Depth | | | | 6 | 6 | 6 | 6 | 6 | 6 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 5.5 | 12.1 | 4.4 | 10.9 | 13.1 | 12.9 | 11.7 | 13.6 | 12.0 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-546-SA5D-SB-5.0-6.0 | SVL-550-SA5D-SB-5.0-6.0 | SVL-577-SA5B-SB-5.3-5.8 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 | SVL-518-SA5C-SB-5.5-6.0 | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | SVL-549-SA5C-SB-6.3-6.8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/27/2014 | 05/27/2014 | 06/04/2014 | 05/22/2014 | 05/22/2014 | 06/02/2014 | 05/20/2014 | 05/22/2014 | 06/10/2014 |
| | | | SDG | PH200 | PH200 | PH216 | PH195 | PH195 | PH211 | PH189 | PH195 | PH226 |
| | | | Start Depth | 5 | 5 | 5.3 | 5.5 | 5.5 | 5.5 | 6 | 6 | 6.3 |
| | | | End Depth | 6 | 6 | 5.8 | | | 6 | | | 6.8 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 13.1 | 11.2 | 8.4 | 10.1 | 11.0 | 13.2 | 7.2 | 7.7 | 12.5 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-630-SA8-SB-7.0-8.0 | FDG2-SL-631-SA8-SB-7.0-8.0 | SL-840-SA5B-SB-7.0-8.0 | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | SVL-519-SA8-SB-7.5-8.0 | FDG-SL-757-SA5C-SB-8.0-9.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/05/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/16/2014 | 05/14/2014 |
| | | | SDG | PH227 | PH220 | PH158 | PH159 | PH207 | PH199 | PH181 | PH177 |
| | | | Start Depth | 7 | 7 | 7 | 7 | 7.5 | 7.5 | 7.5 | 8 |
| | | | End Depth | 8 | 8 | 8 | 8 | | | 8 | 9 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 8.0 | 16.6 | 13.2 | 10.1 | 6.3 | 5.8 | 4.7 | 6.2 |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-699-SA5B-TR-8.0 | SVL-562-SA5B-SB-8.0-9.0 | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-839-SA5B-SB-9.0-10.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/28/2014 | 06/10/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/14/2014 | 01/14/2014 |
| | | | SDG | PH204 | PH226 | PH196 | PH193 | PH196 | PH177 | PH159 |
| | | | Start Depth | 8 | 8 | 9 | 9 | 9 | 9 | 9 |
| | | | End Depth | | 9 | 10 | 10 | 10 | 10 | 10 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.6 | 6.6 | 11.7 | 5.0 | 6.2 | 9.5 | 9.2 |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-553-SA5D-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SVL-517-SA8-SB-10.0-11.0 | SVL-525-SA5C-SB-10.0-11.0 | SVL-556-SA5D-SB-10.0-11.0 | SL-611-SA8-TR-10.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/03/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 | 05/19/2014 | 05/20/2014 | 06/03/2014 | 05/20/2014 |
| | | | SDG | PH214 | PH185 | PH207 | PH209 | PH212 | PH183 | PH186 | PH214 | PH189 |
| | | | Start Depth | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10.5 |
| | | | End Depth | 10 | | | | | 11 | 11 | 11 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 160.3M | MOIST | Moisture | % | 12.3 | 12.7 | 8.9 | 4.8 | 4.4 | 17.5 | 16.2 | 12.3 | 10.7 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-561-SA5C-SB-10.5-11.0 | SL-529-SA5B-TR-11.0 | SL-686-SA6-TR-11.0 | SVL-518-SA5C-SB-11.0-11.5 | SVL-528-SA8-SB-11.0-12.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 05/28/2014 | 05/21/2014 | 06/02/2014 | 05/19/2014 | 05/20/2014 | 05/22/2014 |
| | | | SDG | PH226 | PH204 | PH192 | PH211 | PH183 | PH188 | PH196 |
| | | | Start Depth | 10.5 | 11 | 11 | 11 | 11 | 12 | 13 |
| | | | End Depth | 11 | | | 11.5 | 12 | 13 | 14 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 12.1 | 8.6 | 4.5 | 4.7 | 15.6 | 7.0 | 8.0 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 | SVL-553-SA5D-SB-14.0-15.0 | FDG-SL-756-SA5C-SB-15.0-16.0 | FDG-SL-836-SA5B-SB-15.0-16.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 05/22/2014 | 06/03/2014 | 05/13/2014 | 05/13/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH193 | PH196 | PH214 | PH176 | PH176 | PH209 | PH212 |
| | | | Start Depth | 14 | 14 | 14 | 15 | 15 | 15 | 15 |
| | | | End Depth | 15 | 15 | 15 | 16 | 16 | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 160.3M | MOIST | Moisture | % | 6.0 | 6.0 | 12.4 | 6.9 | 15.0 | 5.4 | 3.1 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SVL-525-SA5C-SB-15.0-16.0 | SL-839-SA5B-SB-15.5-16.5 | SVL-517-SA8-SB-15.5-16.5 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 | SVL-553-SA5D-SB-19.0-20.0 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N |
| | | | Sample Date | 05/20/2014 | 01/14/2014 | 05/19/2014 | 05/21/2014 | 05/13/2014 | 06/03/2014 |
| | | | SDG | PH186 | PH159 | PH183 | PH193 | PH176 | PH214 |
| | | | Start Depth | 15 | 15.5 | 15.5 | 19 | 19 | 19 |
| | | | End Depth | 16 | 16.5 | 16.5 | 20 | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 160.3M | MOIST | Moisture | % | 12.1 | 13.9 | 11.7 | 4.3 | 5.3 | 12.2 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-564-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 | 06/10/2014 |
| | | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 | PH227 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 21 | 59 | 19 U | 9.7 J Z | 22 U | 18 U | 18 |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 22 U | 18 U | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 UJ FD | 1.7 U | 1.7 U | 1.7 U | 0.55 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.4 J FD, Z | 1.7 U | 1.7 U | 1.7 U | 1.5 J Z | 0.86 J Z | 1.4 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 22 U | 18 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 UJ FD | 1.7 U | 1.7 U | 1.7 U | 2.1 U | 1.7 U | 1.7 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 17 U | 17 U | 17 UJ L | 21 U | 17 U | 17 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 UJ FD | 1.7 U | 1.7 U | 1.7 U | 2.1 U | 1.7 U | 1.7 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.5 J FD, Z | 1.7 U | 1.7 U | 1.7 U | 0.91 J Z | 0.95 J Z | 1.6 J Z |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.7 J FD | 0.80 J Z | 0.85 J Z | 1.7 U | 1.8 J Z | 0.93 J Z | 1.8 |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 7.3 J FD | 3.3 | 7.4 | 1.7 U | 11 | 3.9 | 3.1 |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 0.48 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.5 J FD, Q, Z | 1.0 J L, Z | 1.1 J Z | 1.7 U | 1.4 J Z | 0.94 J Z | 1.8 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 0.76 J FD, Z | 1.7 U | 1.7 U | 1.7 U | 2.1 U | 1.7 U | 1.7 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 2.1 U | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 UJ FD | 2.2 | 1.7 U | 1.7 U | 2.1 U | 1.7 U | 1.7 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 UJ L | 1.7 U | 1.7 U | 1.7 U | 2.1 U | 1.7 U | 1.7 UJ L |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 2.1 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 22 U | 18 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 18 U | 19 U | 18 U | 22 U | 18 U | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.4 J FD, Z | 1.7 U | 0.75 J Z | 1.7 U | 3.3 | 0.69 J Z | 1.5 J Z |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 8.2 J FD, Z | 33 | 19 U | 18 U | 22 U | 18 U | 19 |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 UJ FD | 1.2 J Z | 2.5 | 4.1 | 8.7 | 1.0 J Z | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 0.77 J FD, Z | 1.7 U | 1.7 U | 1.7 U | 2.0 J Z | 1.7 U | 0.74 J Z |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.4 J FD, Z | 1.7 U | 0.76 J Z | 1.7 U | 4.9 | 0.75 J Z | 2.6 |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 0.83 J FD, Z | 1.7 U | 1.7 U | 0.81 J Z | 2.7 | 1.7 U | 1.1 J Z |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-575-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 | 06/12/2014 | 06/18/2014 | 05/22/2014 |
| | | | | SDG | PH227 | PH235 | PH235 | PH231 | PH231 | PH237 | PH196 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 54 | 6.4 J Z | 190 U | 25 | 15 J Z | 180 U | 20 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 18 U | 190 U | 18 U | 18 U | 180 U | 20 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 1.7 U | 18 U | 1.7 U | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.5 J Z | 1.5 J Z | 16 J Z | 2.9 | 0.70 J Z | 17 U | 1.8 U | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 18 U | 190 U | 18 U | 18 U | 180 U | 20 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 1.7 U | 18 U | 0.75 J Z | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 17 U | 180 U | 17 U | 17 U | 170 U | 18 UJ L | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 1.7 U | 18 U | 0.67 J Z | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 2.1 | 2.3 | 9.8 J Z | 2.9 | 0.88 J Z | 17 U | 1.8 U | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.9 | 1.7 | 17 J Z | 3.0 | 0.78 J Z | 17 U | 1.8 U | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 5.4 | 4.8 | 13 J Z | 9.5 | 1.3 J Z | 10 J Z | 1.8 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 18 U | 1.7 U | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 2.9 J L | 1.9 | 18 | 2.7 | 0.80 J Z | 17 U | 1.8 U | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 0.81 J Z | 0.69 J Z | 18 U | 1.4 J Z | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 18 U | 1.7 U | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 2.2 | 0.75 J Z | 18 U | 1.3 J Z | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 18 U | 1.7 U | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 18 U | 1.7 U | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 18 U | 190 U | 18 U | 18 U | 180 U | 20 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 18 U | 190 U | 18 U | 18 U | 180 U | 20 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.1 J Z | 1.4 J Z | 48 | 1.9 | 0.68 J Z | 17 U | 1.8 U | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 120 | 18 U | 190 U | 17 J Z | 18 U | 180 U | 20 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.3 J Z | 1.7 U | 18 U | 1.1 J Z | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 0.71 J Z | 25 | 0.89 J Z | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 | 1.0 J Z | 70 | 2.2 | 1.7 U | 17 U | 1.8 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 0.95 J Z | 0.69 J Z | 26 | 1.2 J Z | 0.88 J Z | 17 U | 1.8 U | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 | FDG2-SL-874-SA5A-SB-0.0-0.5 | FDG2-SL-875-SA5A-SB-0.0-0.5 | FDG2-SL-876-SA5A-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | FD | N | N | N |
| | | | | Sample Date | 05/21/2014 | 05/21/2014 | 05/21/2014 | 06/09/2014 | 05/20/2014 | 06/16/2014 | 06/16/2014 |
| | | | | SDG | PH193 | PH193 | PH193 | PH224 | PH188 | PH234 | PH234 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 22 | 34 | 12 J Z | 20 | 19 U | 15 J Z | 180 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 19 U | 19 U | 18 U | 19 U | 18 U | 180 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 12 | 1.7 J Z | 1.7 U | 0.65 J FD, Z | 1.8 U | 0.87 J Z | 17 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 30 | 8.7 | 0.89 J Z | 3.1 J FD | 1.8 U | 11 | 33 | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 19 U | 18 U | 19 U | 18 U | 180 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 97 | 11 J FD, Q | 1.7 U | 0.84 J FD, Z | 1.8 U | 1.7 | 7.0 J Z | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 64 | 13 J Q, Z | 18 U | 17 U | 18 U | 4.0 J Z | 170 U | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 110 | 13 J FD, Q | 1.7 U | 0.76 J FD, Z | 1.8 U | 1.3 J Z | 17 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 73 | 18 J Q | 1.0 J Z | 3.0 J FD | 1.8 U | 8.5 | 21 | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 49 | 11 J Q | 1.2 J Z | 3.4 J FD | 1.8 U | 14 | 42 | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 22 | 4.8 | 1.7 U | 15 J FD | 1.8 U | 6.6 | 24 | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.6 J Z | 0.35 J Z | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 17 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 41 | 14 J Q | 1.2 J Z | 3.1 J FD | 1.8 U | 9.0 J L | 29 J L | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 31 | 7.5 | 1.7 U | 1.5 J FD, Z | 1.8 U | 2.9 | 17 U | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 14 | 2.1 | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 17 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 25 | 5.7 | 1.7 U | 0.97 J FD, Z | 1.8 U | 2.9 | 6.9 J Z | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.8 U | 1.7 U | 1.7 UJ L | 1.8 U | 1.7 U | 17 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 17 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 19 U | 18 U | 19 U | 18 U | 180 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 7.1 J FD, Z | 19 U | 18 U | 19 U | 18 U | 180 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 48 | 8.4 J Q | 1.0 J Z | 2.8 J FD | 1.8 U | 6.8 | 26 | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 19 U | 19 U | 32 J FD | 19 U | 18 U | 180 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 0.81 J Z | 1.8 U | 1.7 U | 1.5 J FD, Z | 1.8 U | 1.7 U | 17 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 3.7 | 1.6 J Z | 0.72 J Z | 1.8 J FD | 1.8 U | 1.7 U | 17 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 5.7 | 2.0 | 0.77 J Z | 5.9 J FD | 1.8 U | 1.7 U | 17 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 5.8 | 2.5 | 1.3 J Z | 2.5 J FD | 1.8 U | 1.7 U | 17 U | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-877-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-1049-SA5C-SB-0.0-0.5 | FDG-SL-511-SA5C-SB-0.0-0.5 | FDG-SL-748-SA5C-SB-0.0-0.5 | FDG-SL-749-SA5C-SB-0.0-0.5 | FDG-SL-757-SA5C-SB-0.0-0.5 |
| | | | Sample Type | N | FD | FD | N | N | N | N |
| | | | Sample Date | 06/16/2014 | 05/21/2014 | 05/08/2014 | 05/08/2014 | 05/12/2014 | 05/08/2014 | 05/14/2014 |
| | | | SDG | PH234 | PH193 | PH173 | PH173 | PH175 | PH173 | PH177 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 8.3 J Z | 22 | 9.8 J Z, C | 25 J C | 13 J Z | 12 J Q, Z, C | 14 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 18 U | 19 U | 19 UJ FD, C | 19 UJ C | 19 U | 9.3 J FD, Z, C | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 2.5 | 1.1 J FD, Z | 8.5 | 0.85 J Z | 2.0 J FD, Q | 0.35 J Z |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.8 | 11 | 1.2 J FD, Z | 21 | 6.3 | 2.1 J FD, Q | 2.0 |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 20 J FD | 1.7 U | 4.6 | 2.6 | 1.7 U | 2.8 |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 17 U | 18 | 18 U | 13 J Z | 3.8 J Z | 18 U | 11 J Z |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 22 J FD | 1.7 U | 3.0 | 1.9 | 1.7 U | 1.3 J Z |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.8 | 24 | 1.7 UJ FD, C | 14 J C | 6.6 | 1.0 J FD, Z, C | 7.8 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 2.3 | 15 | 0.80 J FD, Z | 18 | 7.0 | 1.9 J FD, Q | 1.7 |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 2.6 | 6.2 | 1.7 U | 5.7 | 1.9 | 1.7 U | 2.5 |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 0.49 J Z | 1.7 U | 2.0 | 1.8 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 2.2 J L | 20 | 0.46 J FD, Z | 14 | 6.0 | 1.3 J FD, Z | 5.4 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 0.73 J Z | 9.1 | 1.7 UJ FD | 9.1 | 2.8 | 0.89 J FD, Z | 3.8 |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 3.0 | 1.7 U | 1.9 | 1.8 U | 1.7 U | 1.7 |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | 7.4 | 0.95 J Z | 10 | 3.0 | 1.2 J Z | 1.2 J Z |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 3.0 | 1.8 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 19 UJ FD | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.3 J Z | 12 | 9.7 | 75 | 5.7 | 8.6 J Q | 1.4 J Z |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 18 U | 19 U | 7.1 J Z | 11 J Z | 19 U | 6.8 J Z | 12 J Z |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 3.2 | 1.8 U | 1.7 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.3 J Z | 1.1 J FD, Z | 62 | 1.2 J Z | 4.1 J FD, Q | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 2.6 | 1.7 UJ FD | 17 | 3.6 | 1.1 J FD, Q, Z | 1.7 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 2.4 | 1.7 UJ FD | 69 | 1.7 J Z | 3.4 J FD, Q | 1.7 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG-SL-798-SA5B-SB-0.0-0.5 | FDG-SL-841-SA5B-SB-0.0-0.5 | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-838-SA5B-SB-0.0-0.5 | SL-839-SA5B-SB-0.0-0.5 | SL-840-SA5B-SB-0.0-0.5 | SL-843-SA5B-SB-0.0-0.5 | SL-503-SA5C-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/07/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 |
| | | | | SDG | PH172 | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 | PH207 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 33 | 9.7 J Z | 9.4 J Z | 19 U | 19 U | 8.0 J Z | 20 U | 19 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 10 J Z | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 29 | 1.7 U | 1.7 U | 1.7 U | 2.8 | 1.7 U | 0.55 J Z | 0.92 J Z | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 280 | 1.7 U | 1.7 U | 1.7 U | 54 | 2.1 | 5.4 | 4.3 | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 590 | 1.7 U | 1.7 U | 1.7 U | 2.4 | 0.95 J Z | 1.9 U | 1.8 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 1100 | 18 U | 18 U | 18 U | 7.2 J Z | 18 U | 19 U | 18 UJ L | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 770 | 1.7 U | 1.7 U | 1.7 U | 2.6 | 1.7 U | 1.9 U | 1.8 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 2600 | 1.7 U | 1.7 U | 1.7 U | 15 | 1.3 J Z | 3.7 | 3.0 | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 330 | 1.7 U | 0.85 J Z | 1.7 U | 38 | 1.9 | 4.4 | 7.5 | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 250 | 1.7 U | 1.7 U | 1.7 U | 8.0 | 1.7 U | 1.5 J Z | 0.79 J Z | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 29 | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.9 U | 0.62 J Z | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 2000 | 1.7 U | 0.66 J Z | 1.7 U | 19 | 1.7 | 3.6 | 4.0 | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 680 | 1.7 U | 1.7 U | 1.7 U | 11 | 0.83 J Z | 1.7 J Z | 0.94 J Z | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 190 | 1.7 U | 1.7 U | 1.7 U | 0.99 J Z | 1.7 U | 1.9 U | 1.8 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 430 | 1.7 U | 1.7 U | 1.7 U | 18 | 0.75 J Z | 2.4 | 1.4 J Z | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.9 U | 1.8 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 0.98 J Z | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.9 U | 1.8 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 160 | 1.7 U | 1.7 U | 1.7 U | 6.1 | 1.4 J Z | 1.8 J Z | 7.5 | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 9.0 J Z | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.9 U | 0.84 J Z | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 18 | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.9 U | 1.6 J Z | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 19 | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.9 U | 6.7 | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 24 | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.9 U | 4.7 | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 | SL-646-SA5C-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/28/2014 | 05/19/2014 | 05/19/2014 | 05/20/2014 | 05/20/2014 | 05/22/2014 | 05/29/2014 | 05/20/2014 | 05/23/2014 | 06/04/2014 |
| | | | | SDG | PH204 | PH185 | PH185 | PH189 | PH189 | PH195 | PH207 | PH189 | PH199 | PH217 |
| | | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | 21 U | -- | -- | -- | -- | -- | -- | -- | -- | -- | 20 U |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 16 J Z | 19 U | 14 J Z | 18 U | 19 U | 19 U | 19 U | 19 U | 11 J Z | 19 U | 18 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 7.9 J Z | 19 U | 20 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.9 | 1.7 U | 0.61 J Z | 1.7 U | 1.7 U | 1.7 U | 0.58 J Z | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 8.6 | 1.7 U | 1.8 | 1.7 U | 1.7 U | 0.99 J Z | 1.6 J Z | 1.3 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 20 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 2.7 | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 2.4 | 2.1 | 1.3 J Z | 1.5 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 4.3 J L, Z | 18 U | 19 U | 17 U | 17 U | 18 UJ L | 18 UJ L | 18 U | 17 UJ L | 17 U | 17 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.9 | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 0.77 J Z | 1.3 J Z | 0.90 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 7.0 | 1.7 UJ C | 1.3 J Z, C | 1.7 U | 1.7 U | 2.4 | 2.4 | 2.2 | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 12 | 1.7 U | 2.6 | 1.7 U | 1.7 U | 0.70 J Z | 1.7 J Z | 1.5 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 2.7 | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 | 0.80 J Z | 1.8 U | 1.7 U | 1.7 U | 1.4 J Z |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 6.9 | 0.99 J Z | 1.8 | 1.7 U | 1.7 U | 2.8 | 1.4 J Z | 2.1 | 1.7 U | 1.7 U | 0.72 J Z |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 4.7 | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 0.77 J Z | 1.5 J Z | 0.72 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 0.97 J Z | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 0.75 J Z | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 6.7 | 1.7 U | 0.85 J Z | 1.7 U | 1.7 U | 0.85 J Z | 0.92 J Z | 0.85 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 UJ L |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 20 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 19 U | 20 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 5.9 | 1.7 U | 3.7 | 1.7 U | 1.7 U | 1.7 U | 1.0 J Z | 1.3 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 7.3 J Z | 19 U | 20 U | 18 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 18 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 0.83 J Z | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 0.73 J Z | 4.3 | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.0 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 0.71 J Z | 1.8 | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U | 1.7 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | FDG2-SL-1175-SA5A-SB-2.0-3.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | FD |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/28/2014 | 05/27/2014 | 05/22/2014 | 06/16/2014 |
| | | | SDG | PH209 | PH212 | PH217 | PH192 | PH201 | PH204 | PH201 | PH195 | PH234 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2 |
| | | | End Depth | | | | | | | | | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | 5 J Z | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 5 J Z | 5 J Z | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | 5 J Z | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | 4 J Z | 4 J Z | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | 21 U | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 18 U | 19 U | 28 | 18 U | 21 | 18 U | 16 J Z | 18 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 18 U | 19 U | 18 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 0.71 J Z | 1.8 U | 1.8 J Q | 1.7 U | 20 | 1.7 U | 0.55 J Z | 1.7 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | -- | 2.4 | 13 | 11 J Q | 0.81 J Z | 77 | 2.0 | 3.1 | 1.0 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 18 U | 19 U | 18 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | 1.7 U | 1.8 U | 3.4 J Q | 1.7 U | 4.6 | 1.7 U | 1.4 J Z | 0.68 J FD, Z |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 UJ L | 17 UJ L | 18 U | 5.5 J Q, Z | 17 UJ L | 10 J L, Z | 17 UJ L | 17 UJ L | 17 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 0.74 J Z | 1.8 U | 3.0 J Q | 1.7 U | 3.6 | 1.7 U | 1.0 J Z | 1.7 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | 1.8 U | 13 J Q | 1.0 J Z | 27 | 1.9 | 2.9 | 2.4 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | -- | 3.5 | 1.8 U | 16 J Q | 1.1 J Z | 73 | 2.9 | 3.9 | 1.3 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 3.9 J Q | 1.7 U | 1.7 U | 1.7 U | 1.1 J Z | 1.3 J Z |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 0.64 J Z | 1.7 U | 8.8 | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | -- | 1.3 J Z | 1.6 J Z | 14 J Q | 1.3 J Z | 36 | 2.5 | 7.1 | 2.7 J L |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | 1.8 U | 3.7 J Q | 1.7 U | 21 | 1.7 U | 1.0 J Z | 0.81 J Z |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.0 J Q, Z | 1.7 U | 1.5 J Z | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | 1.5 J Z | 1.8 U | 3.9 J Q | 1.7 U | 45 | 0.71 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.7 U | 1.8 UJ L | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.7 U | 3.8 | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 18 U | 19 U | 18 U | 18 U | 7.2 J Z | 18 U | 18 U | 18 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 18 U | 19 U | 7.6 J Z | 18 U | 19 U | 18 U | 6.2 J Z | 18 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.4 J Z | 2.8 | 1.8 U | 7.4 J Q | 1.7 U | 700 | 2.2 | 1.7 | 1.7 UJ FD |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 18 U | 19 U | 18 U | 18 U | 19 U | 18 U | 18 U | 18 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 0.88 J Q, Z | 1.7 U | 3.0 | 1.7 U | 1.7 U | 1.7 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.1 J Q, Z | 1.7 U | 280 | 0.92 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.2 J Z | 1.7 U | 1.8 U | 1.0 J Q, Z | 0.73 J Z | 76 | 1.4 J Z | 1.7 U | 1.7 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.8 U | 1.4 J Q, Z | 1.7 U | 250 | 1.7 | 1.7 U | 1.7 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | FDG-SL-511-SA5C-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SL-569-SA6-TR-2.5 | FDG2-SL-877-SA5A-SB-3.0-4.0 | SL-529-SA5B-TR-3.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 06/16/2014 | 05/08/2014 | 05/28/2014 | 05/20/2014 | 05/20/2014 | 06/16/2014 | 05/28/2014 |
| | | | SDG | PH193 | PH234 | PH173 | PH204 | PH189 | PH189 | PH234 | PH204 |
| | | | Start Depth | 2 | 2 | 2 | 2 | 2 | 2.5 | 3 | 3 |
| | | | End Depth | 3 | 3 | 3 | | | | 4 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | 22 U | -- | -- | -- | 21 U |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 18 U | 12 J Z, C | 12 J Z | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 18 U | 19 UJ C | 20 U | 19 U | 19 U | 8.1 J Z | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.8 U | 1.7 U | 1.4 J Z | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.8 U | 1.2 J Z | 3.0 | 0.78 J Z | 1.7 U | 1.8 U | 1.7 U | 1.3 J Z |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 18 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.8 U | 1.7 UJ FD | 2.1 | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.5 J Z |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 17 U | 6.7 J Z | 18 UJ L | 18 U | 18 U | 17 U | 18 UJ L |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.8 U | 1.7 U | 0.88 J Z | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.8 U | 2.0 | 5.8 J C | 0.73 J Z | 1.7 U | 1.8 U | 1.7 U | 1.9 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.8 U | 1.4 J Z | 2.1 | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.6 J Z |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.8 U | 1.5 J Z | 2.4 | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 0.84 J Z |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.8 U | 2.4 J L | 5.9 | 0.78 J Z | 1.7 U | 1.8 U | 1.7 U | 1.7 J Z |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.8 U | 0.84 J Z | 3.6 | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 0.87 J Z |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.8 U | 1.7 U | 1.0 J Z | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.8 U | 1.7 U | 2.0 | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.0 J Z |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 18 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 18 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.8 U | 0.70 J FD, Z | 11 | 0.89 J Z | 1.7 U | 1.8 U | 1.7 U | 1.1 J Z |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 18 U | 19 U | 20 U | 19 U | 19 U | 18 U | 19 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.8 U | 1.7 U | 2.8 | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 0.94 J Z |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.8 U | 1.7 U | 0.69 J Z | 0.98 J Z | 1.7 U | 1.8 U | 1.7 U | 1.2 J Z |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.8 U | 1.7 U | 2.4 | 1.1 J Z | 1.7 U | 1.8 U | 1.7 U | 1.5 J Z |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/28/2014 | 05/28/2014 | 05/27/2014 | 05/23/2014 | 05/27/2014 | 05/20/2014 | 05/21/2014 | 05/21/2014 |
| | | | SDG | PH204 | PH204 | PH201 | PH199 | PH201 | PH188 | PH193 | PH193 |
| | | | Start Depth | 3 | 3 | 3 | 3.5 | 3.5 | 4 | 4 | 4 |
| | | | End Depth | | | | | | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 21 U |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 21 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 2.0 | 7.6 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 10 | 23 | 1.7 U | 1.8 U | 1.8 U | 0.89 J Z | 1.8 U | 1.9 U |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 21 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 2.4 | 3.3 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 UJ L | 4.1 J L, Z | 18 UJ L | 18 UJ L | 18 UJ L | 18 U | 18 U | 19 U |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 2.2 | 2.1 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 6.7 | 9.4 | 1.7 U | 1.8 U | 1.8 U | 0.93 J Z | 1.8 U | 1.9 U |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 11 | 19 | 1.7 U | 1.8 U | 1.8 U | 1.7 J Z | 1.8 U | 1.9 U |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 2.3 | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 2.5 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 6.4 | 12 | 1.7 U | 1.8 U | 1.8 U | 1.2 J Z | 1.8 U | 1.9 U |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 5.0 | 8.0 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 0.87 J Z | 0.88 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 5.7 | 14 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.2 J Z | 1.6 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 21 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 21 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 8.4 | 180 | 1.7 U | 1.8 U | 1.8 U | 1.7 J FD, Z | 1.8 U | 1.9 U |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 21 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 2.1 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 73 | 1.0 J Z | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 15 | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 59 | 1.3 J Z | 1.8 U | 1.8 U | 1.8 UJ FD | 1.8 U | 1.9 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-874-SA5A-SB-4.0-5.0 | FDG2-SL-876-SA5A-SB-4.0-5.0 | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG-SL-748-SA5C-SB-4.0-5.0 | FDG-SL-757-SA5C-SB-4.0-5.0 | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 06/16/2014 | 06/11/2014 | 05/12/2014 | 05/14/2014 | 05/14/2014 | 05/14/2014 |
| | | | | SDG | PH188 | PH234 | PH229 | PH175 | PH177 | PH177 | PH177 |
| | | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 19 U | 10 J Z | 87 | 12 J Z | 8.2 J Z | 9.4 J Z | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 20 U | 20 U | 19 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 0.54 J Z | 1.8 U | 1.8 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 0.91 J Z | 1.7 U | 0.75 J Z | 1.8 U | 3.7 | 1.8 U | 0.81 J Z | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 20 U | 20 U | 19 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 2.0 | 1.8 U | 1.8 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 18 U | 17 U | 18 U | 5.2 J Z | 19 U | 18 U | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.3 J Z | 1.8 U | 1.8 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.2 J Z | 1.7 U | 0.88 J Z | 1.8 U | 6.0 | 1.8 U | 1.8 U | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.8 | 1.7 U | 0.95 J Z | 1.8 U | 3.8 | 1.8 U | 0.95 J Z | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.8 U | 1.7 U | 3.8 | 1.8 U | 2.2 | 1.8 U | 1.8 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.4 J Z | 0.47 J L, Z | 1.1 J Z | 1.8 U | 4.6 | 0.52 J Z | 0.65 J Z | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 3.0 | 1.8 U | 1.8 U | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 0.81 J Z | 1.8 U | 1.8 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 2.2 | 1.8 U | 1.8 U | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 20 U | 20 U | 19 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 20 U | 20 U | 19 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 2.9 J FD | 1.7 U | 0.78 J Z | 1.8 U | 1.9 | 1.8 U | 0.71 J Z | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 20 U | 20 U | 19 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.8 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.0 J Z | 1.8 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.0 J FD, Z | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 0.87 J Z | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 |
| | | | | SDG | PH158 | PH159 | PH158 | PH159 | PH207 | PH185 | PH185 | PH207 | PH189 |
| | | | | Start Depth | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 |
| | | | | End Depth | 5 | 5 | 5 | 5 | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 20 U | 20 U | 20 U | 20 U | 19 U | 21 U | 19 U | 20 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 20 U | 20 U | 20 U | 20 U | 19 U | 21 U | 19 U | 20 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 0.49 J FD, Z | 0.75 J Z | 1.8 U | 1.9 U | 0.90 J Z | 1.8 U | 1.9 U | 0.59 J Z | 1.8 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 4.7 J FD | 7.0 J Q | 0.99 J Z | 1.4 J Z | 2.5 | 1.8 U | 1.9 U | 1.0 J Z | 1.8 U | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 20 U | 20 U | 20 U | 20 U | 19 U | 21 U | 19 U | 20 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.9 J FD | 0.96 J FD, Z | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.1 J Z | 1.8 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 UJ L | 18 U | 20 U | 18 UJ L | 19 U | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.8 J FD | 1.1 J FD, Z | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 5.7 J FD | 6.0 J FD | 1.8 U | 1.1 J Z | 1.9 U | 1.8 UJ C | 1.9 UJ C | 0.72 J Z | 1.8 U | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 3.7 J FD | 5.8 | 0.93 J Z | 1.1 J Z | 3.4 | 1.8 U | 1.9 U | 1.1 J Z | 1.8 U | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 2.2 J FD | 2.5 J FD | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 5.0 J FD | 14 J FD | 0.58 J Z | 1.6 J Z | 0.76 J Z | 1.8 U | 1.9 U | 1.6 J Z | 1.8 U | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 3.5 J FD | 2.4 | 1.8 U | 0.95 J Z | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 3.5 J FD | 4.1 | 1.8 U | 1.9 U | 0.93 J Z | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 4.6 | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 20 U | 20 U | 20 U | 20 U | 19 U | 21 U | 19 U | 20 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 20 U | 20 U | 20 U | 20 U | 19 U | 21 U | 19 U | 20 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.4 J FD, Z | 2.1 | 1.8 U | 1.1 J Z | 5.0 | 1.8 U | 1.9 U | 1.2 J Z | 1.8 U | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 20 U | 20 U | 20 U | 20 U | 19 U | 21 U | 19 U | 20 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 0.90 J Z | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.8 U | 1.8 UJ FD | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.8 U | 0.76 J FD, Z | 1.8 U | 0.91 J Z | 1.4 J Z | 1.8 U | 1.9 U | 1.0 J Z | 1.8 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.8 U | 1.8 UJ FD | 1.8 U | 1.9 U | 1.9 U | 1.8 U | 1.9 U | 0.74 J Z | 1.8 U | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | FD | FD | N | N |
| | | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 |
| | | | | SDG | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 | PH185 | PH209 | PH195 | PH195 |
| | | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.5 | 5.5 |
| | | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | 5 J Z | -- | -- | -- | -- | -- | -- | 5 J Z | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | 4 J Z | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | 4 J Z | -- | -- | -- | -- | -- | -- | 4 J Z | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | 21 U | -- | -- | 21 U | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | 20 U | 20 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | 20 U | 20 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.7 U | -- | 1.7 U | 1.7 U | 1.8 U | 0.71 J Z | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | 20 U | 20 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 18 UJ L | 17 UJ L | 18 U | 18 U | 18 UJ L | 19 U | 18 UJ L | 19 UJ L | 19 UJ L | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.7 U | -- | 1.7 UJ C | 1.7 U | 1.8 U | 1.8 U | 1.9 UJ C | -- | 1.9 U | 1.9 U | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.7 U | -- | 1.7 U | 1.7 U | 1.8 U | 0.82 J Z | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 0.68 J Z | 1.9 U | -- | 1.9 U | 1.9 U | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.7 U | -- | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | -- | 1.9 U | 1.9 U | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | -- | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 UJ L | 1.7 U | 1.7 U | 1.7 UJ L | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | 20 U | 20 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | 20 U | 20 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.7 U | -- | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 19 U | 19 U | 19 U | 19 U | 19 U | 20 U | 19 U | 20 U | 20 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.7 U | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 1.7 U | 1.9 U | 1.9 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 1.7 UJ FD | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 0.89 J FD, Z | 1.9 U | 1.9 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 0.83 J Z | 1.7 U | 1.7 U | 1.8 U | 1.8 U | 1.9 U | 0.81 J Z | 1.9 U | 1.9 U | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | FDG2-SL-631-SA8-SB-7.0-8.0 | SL-840-SA5B-SB-7.0-8.0 | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | FDG-SL-757-SA5C-SB-8.0-9.0 | SL-699-SA5B-TR-8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 05/22/2014 | 06/05/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/14/2014 | 05/28/2014 |
| | | | | SDG | PH189 | PH195 | PH220 | PH158 | PH159 | PH207 | PH199 | PH177 | PH204 |
| | | | | Start Depth | 6 | 6 | 7 | 7 | 7 | 7.5 | 7.5 | 8 | 8 |
| | | | | End Depth | | | 8 | 8 | 8 | | | 9 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 20 U | 45 | 20 U | 20 U | 19 U | 19 U | 8.2 J Z | 19 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 20 U | 22 U | 20 U | 20 U | 19 U | 19 U | 19 U | 19 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 2.9 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 20 U | 22 U | 20 U | 20 U | 19 U | 19 U | 19 U | 19 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 0.74 J Z | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 18 UJ L | 20 U | 19 U | 19 U | 18 UJ L | 18 UJ L | 18 U | 18 UJ L | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 2.2 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 2.2 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.3 J Z | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.8 U | 1.8 U | 0.55 J Z | 1.9 U | 2.3 | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.7 J Z | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.4 J Z | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.8 U | 1.8 U | 2.0 UJ L | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 20 U | 22 U | 20 U | 20 U | 19 U | 19 U | 19 U | 19 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 20 U | 22 U | 20 U | 20 U | 19 U | 19 U | 19 U | 19 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.7 J Z | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 20 U | 22 U | 20 U | 20 U | 19 U | 19 U | 19 U | 19 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 1.9 | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 6.4 | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.8 U | 1.8 U | 2.0 U | 3.4 | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-839-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/14/2014 | 01/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 |
| | | | | SDG | PH196 | PH193 | PH196 | PH177 | PH159 | PH185 | PH207 | PH209 |
| | | | | Start Depth | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 |
| | | | | End Depth | 10 | 10 | 10 | 10 | 10 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | 5 J Z | |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | 4 J Z | |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 20 U | 11 J Z | 18 J Z | 8.4 J Z | 22 J L | 21 U | 20 U | 19 U | |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 20 U | 19 U | 19 U | 20 U | 20 U | 21 U | 20 U | 19 U | |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.6 J Z | 1.9 U | 1.3 J Z | 1.8 U | |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 29 | 1.9 U | 2.8 | 1.8 U | |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 20 U | 19 U | 19 U | 20 U | 20 U | 21 U | 20 U | 19 U | |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.5 J Z | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 19 UJ L | 18 U | 18 UJ L | 19 U | 4.7 J Z | 19 U | 19 UJ L | 18 UJ L | |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.7 J Z | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 0.85 J Z | 10 | 1.9 UJ C | 1.8 U | -- | |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 23 | 1.9 U | 4.1 | 1.8 U | |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 5.5 | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 12 | 1.9 U | 0.87 J Z | 1.8 U | |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 6.3 | 1.9 U | 1.8 U | -- | |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 9.8 | 1.9 U | 1.0 J Z | 1.8 U | |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 20 U | 19 U | 19 U | 20 U | 20 U | 21 U | 20 U | 19 U | |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 20 U | 19 U | 19 U | 20 U | 20 U | 21 U | 20 U | 19 U | |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 0.78 J Z | 5.5 | 1.9 U | 4.4 | 1.8 U | |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 20 U | 19 U | 19 U | 20 U | 20 U | 21 U | 20 U | 19 U | |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 0.79 J Z | 1.8 U | |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 0.80 J Z | 1.8 U | |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.9 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 | SL-529-SA5B-TR-11.0 | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/02/2014 | 05/20/2014 | 05/28/2014 | 05/21/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 |
| | | | SDG | PH212 | PH189 | PH204 | PH192 | PH188 | PH196 | PH193 | PH196 |
| | | | Start Depth | 10 | 10.5 | 11 | 11 | 12 | 13 | 14 | 14 |
| | | | End Depth | | | | | 13 | 14 | 15 | 15 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | 22 U | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 19 U | 20 U | 12 J Z | 19 U | 19 U | 20 U | 19 U | 14 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 20 U | 20 U | 19 U | 19 U | 20 U | 19 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 1.7 U | 1.8 U | 1.4 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 20 U | 20 U | 19 U | 19 U | 20 U | 19 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.7 U | 1.8 U | 0.80 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 UJ L | 19 U | 19 UJ L | 18 U | 18 U | 18 UJ L | 18 U | 18 UJ L |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.7 UJ C | 1.8 U | 1.5 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 1.7 U | 1.8 U | 1.5 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.7 U | 1.8 U | 0.75 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.7 U | 1.8 U | 1.4 J Z | 1.7 U | 1.8 U | 0.38 J Z | 1.8 U | 1.8 U |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.7 U | 1.8 U | 1.1 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.7 U | 1.8 U | 1.3 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 20 U | 20 U | 19 U | 19 U | 20 U | 19 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 20 U | 20 U | 19 U | 19 U | 20 U | 19 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.7 U | 1.8 U | 0.99 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 20 U | 20 U | 19 U | 19 U | 20 U | 19 U | 19 U |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.7 U | 1.8 U | 1.5 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.7 U | 1.8 U | 1.0 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.7 U | 1.8 U | 1.3 J Z | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-756-SA5C-SB-15.0-16.0 | FDG-SL-836-SA5B-SB-15.0-16.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 | SL-839-SA5B-SB-15.5-16.5 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/13/2014 | 05/13/2014 | 05/30/2014 | 06/02/2014 | 01/14/2014 | 05/21/2014 | 05/13/2014 |
| | | | SDG | PH176 | PH176 | PH209 | PH212 | PH159 | PH193 | PH176 |
| | | | Start Depth | 15 | 15 | 15 | 15 | 15.5 | 19 | 19 |
| | | | End Depth | 16 | 16 | | | 16.5 | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | -- | 4 J Z | -- | -- | -- | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | -- | 4 J Z | -- | -- | -- | -- |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 110-91-8 | Morpholine | µg/kg | -- | -- | -- | -- | -- | -- | -- |
| 8270D SIM | 117-81-7 | Bis(2-ethylhexyl)phthalate | µg/kg | 14 J Z | 10 J Z | 19 U | 19 U | 21 U | 19 U | 12 J Z |
| 8270D SIM | 117-84-0 | Di-n-octylphthalate | µg/kg | 19 U | 21 U | 19 U | 19 U | 21 U | 19 U | 19 U |
| 8270D SIM | 120-12-7 | Anthracene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 130 | 1.7 U | 2.1 |
| 8270D SIM | 129-00-0 | Pyrene | µg/kg | 0.94 J Z | 2.0 U | 1.8 U | 1.7 U | 550 | 1.7 U | 9.8 |
| 8270D SIM | 131-11-3 | Dimethylphthalate | µg/kg | 19 U | 21 U | 19 U | 19 U | 21 U | 19 U | 19 U |
| 8270D SIM | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 11 | 1.7 U | 1.7 J Z |
| 8270D SIM | 192-97-2 | Benzo(e)pyrene | µg/kg | 18 U | 20 U | 18 UJ L | 18 UJ L | 31 | 18 U | 5.6 J Z |
| 8270D SIM | 193-39-5 | Indeno(1,2,3-cd)pyrene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 12 | 1.7 U | 0.95 J Z |
| 8270D SIM | 205-99-2 | Benzo(b)fluoranthene | µg/kg | 1.8 U | 2.0 U | -- | 1.7 UJ C | 83 | 1.7 U | 4.9 |
| 8270D SIM | 206-44-0 | Fluoranthene | µg/kg | 0.88 J Z | 2.0 U | 1.8 U | 1.7 U | 470 | 1.7 U | 6.1 |
| 8270D SIM | 207-08-9 | Benzo(k)fluoranthene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 43 | 1.7 U | 5.3 |
| 8270D SIM | 208-96-8 | Acenaphthylene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 1.9 U | 1.7 U | 0.35 J Z |
| 8270D SIM | 218-01-9 | Chrysene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 0.62 J Z | 100 | 1.7 U | 11 |
| 8270D SIM | 50-32-8 | Benzo(a)pyrene | µg/kg | 1.8 U | 2.0 U | -- | 1.7 U | 48 | 1.7 U | 5.7 |
| 8270D SIM | 53-70-3 | Dibenzo(a,h)anthracene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 4.3 | 1.7 U | 0.99 J Z |
| 8270D SIM | 56-55-3 | Benzo(a)anthracene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 110 | 1.7 U | 5.0 |
| 8270D SIM | 62-75-9 | N-Nitrosodimethylamine | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 1.9 U | 1.7 U | 1.8 U |
| 8270D SIM | 83-32-9 | Acenaphthene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 29 | 1.7 U | 2.0 |
| 8270D SIM | 84-66-2 | Diethylphthalate | µg/kg | 19 U | 21 U | 19 U | 19 U | 21 U | 19 U | 19 U |
| 8270D SIM | 84-74-2 | Di-n-butylphthalate | µg/kg | 19 U | 21 U | 19 U | 19 U | 21 U | 19 U | 19 U |
| 8270D SIM | 85-01-8 | Phenanthrene | µg/kg | 1.1 J Z | 0.94 J Z | 1.8 U | 1.7 U | 570 | 1.7 U | 16 |
| 8270D SIM | 85-68-7 | Butylbenzylphthalate | µg/kg | 19 U | 21 U | 19 U | 19 U | 21 U | 19 U | 6.4 J Z |
| 8270D SIM | 86-73-7 | Fluorene | µg/kg | 1.8 U | 2.0 U | 1.8 U | 1.7 U | 19 | 1.7 U | 3.9 |
| 8270D SIM | 90-12-0 | 1-Methylnaphthalene | µg/kg | 1.8 U | 1.8 J Z | 1.8 U | 1.7 U | 0.87 J Z | 1.7 U | 4.7 |
| 8270D SIM | 91-20-3 | Naphthalene | µg/kg | 1.8 U | 2.7 | 1.8 U | 1.7 U | 1.1 J Z | 1.7 U | 1.8 |
| 8270D SIM | 91-57-6 | 2-Methylnaphthalene | µg/kg | 1.8 U | 3.0 | 1.8 U | 1.7 U | 1.2 J Z | 1.7 U | 5.9 |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-564-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 | 06/10/2014 |
| | | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 | PH227 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 8.9 J Z | 17 U | 21 U | 17 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 U | 33 U | 34 U | 33 U | 41 U | 34 U | 33 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 U | 33 U | 34 U | 33 U | 41 U | 34 U | 33 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 17 U | 21 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 U | 33 U | 34 U | 33 U | 41 U | 34 U | 33 U |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-566-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-574-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 | 06/12/2014 | 06/18/2014 |
| | | | | SDG | PH227 | PH227 | PH235 | PH235 | PH231 | PH231 | PH237 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 7.5 J Z | 24 | 17 U | 8.0 J Z | 9.5 J Z | 17 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 U | 33 U | 33 U | 35 U | 33 U | 33 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 U | 33 U | 33 U | 35 U | 33 U | 33 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 U | 33 U | 33 U | 35 U | 33 U | 33 U | 34 U |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-575-NBZ-SB-0.0-0.5 | FDG2-SL-576-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 | FDG2-SL-582-NBZ-SB-0.0-0.5 | FDG2-SL-583-NBZ-SB-0.0-0.5 | FDG2-SL-584-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/18/2014 | 06/10/2014 | 05/22/2014 | 06/13/2014 | 06/12/2014 | 06/13/2014 | 05/21/2014 |
| | | | | SDG | PH237 | PH227 | PH196 | PH233 | PH231 | PH233 | PH193 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 18 U | 18 U | 15 J Z | 17 U | 110 |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 U | 33 U | 35 U | 34 U | 33 U | 33 U | 27 J Z |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 U | 33 U | 35 U | 34 U | 33 U | 33 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 U | 33 U | 35 U | 34 U | 33 U | 33 U | 34 U |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-585-NBZ-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-NBZ-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 | FDG2-SL-874-SA5A-SB-0.0-0.5 | FDG2-SL-875-SA5A-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | FD | N | N |
| | | | | Sample Date | 06/13/2014 | 05/21/2014 | 06/13/2014 | 05/21/2014 | 06/09/2014 | 05/20/2014 | 06/16/2014 |
| | | | | SDG | PH233 | PH193 | PH233 | PH193 | PH224 | PH188 | PH234 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 28 | 17 U | 17 U | 17 U | 18 U | 9.7 J Z | |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 26 J Z | 33 U | 34 U | 33 U | 34 U | 33 U | |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 34 U | 33 U | 34 U | 33 U | 34 U | 33 U | |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 18 U | 17 U | 17 U | 17 U | 18 U | 17 U | |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 34 U | 33 U | 34 U | 33 U | 34 U | 33 U | |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-878-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-1049-SA5C-SB-0.0-0.5 | FDG-SL-511-SA5C-SB-0.0-0.5 | FDG-SL-748-SA5C-SB-0.0-0.5 | FDG-SL-749-SA5C-SB-0.0-0.5 | FDG-SL-757-SA5C-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | FD | FD | N | N | N | N |
| | | | | Sample Date | 06/11/2014 | 05/21/2014 | 05/08/2014 | 05/08/2014 | 05/12/2014 | 05/08/2014 | 05/14/2014 |
| | | | | SDG | PH229 | PH193 | PH173 | PH173 | PH175 | PH173 | PH177 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 18 U | 18 U | 11 J Z | 18 U | 18 U | 18 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 30 | 18 U | 11 J Z, *# | 22 | 18 U | 18 U | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 33 U | 22 J Z | 35 U | 19 J Z | 35 U | 35 U | 35 U | 33 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 33 U | 34 U | 35 U | 36 U | 35 U | 35 U | 35 U | 33 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 33 U | 34 U | 35 U | 36 U | 35 U | 35 U | 35 U | 33 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG-SL-798-SA5B-SB-0.0-0.5 | FDG-SL-841-SA5B-SB-0.0-0.5 | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-838-SA5B-SB-0.0-0.5 | SL-839-SA5B-SB-0.0-0.5 | SL-840-SA5B-SB-0.0-0.5 | SL-843-SA5B-SB-0.0-0.5 | SL-503-SA5C-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/07/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 |
| | | | | SDG | PH172 | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 | PH207 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 130 | 17 U | 18 U | 18 U | 18 U | 19 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 32 | 17 U | 17 U | 18 U | 18 U | 8.4 J Z | 7.7 J S, Z | 7.1 J Z |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 17 U | 18 U | 18 U | 18 U | 190 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 17 U | 18 U | 18 U | 18 U | 19 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 30 J Z | 34 U | 34 U | 34 U | 35 U | 35 U | 37 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 17 U | 18 U | 18 U | 18 U | 19 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 34 U | 34 U | 34 U | 35 U | 35 U | 370 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 17 U | 18 U | 61 | 12 J Z | 6.7 J S, Z | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 17 U | 18 U | 18 U | 18 U | 19 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 17 U | 18 U | 18 U | 18 U | 190 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 17 U | 18 U | 18 U | 18 U | 19 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 34 U | 34 U | 34 U | 35 U | 35 U | 37 U | 34 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 | SL-646-SA5C-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/28/2014 | 05/19/2014 | 05/19/2014 | 05/20/2014 | 05/20/2014 | 05/22/2014 | 05/29/2014 | 05/20/2014 | 05/23/2014 | 06/04/2014 |
| | | | | SDG | PH204 | PH185 | PH185 | PH189 | PH189 | PH195 | PH207 | PH189 | PH199 | PH217 |
| | | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 7.3 J Z | 31 | 30 | 17 U | 7.5 J Z |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | | 7.6 J Z | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 99 | 8.4 J Z | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | | 34 U | 34 U | 36 U | 33 U | 33 U | 34 U | 35 U | 35 U | 33 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | | 34 U | 34 U | 36 U | 33 U | 33 U | 34 U | 35 U | 35 U | 33 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | | 18 U | 18 U | 19 U | 17 U | 17 U | 17 U | 18 U | 18 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | | 34 U | 34 U | 36 U | 33 U | 33 U | 34 U | 35 U | 35 U | 33 U | 34 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | FDG2-SL-1175-SA5A-SB-2.0-3.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | FD |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/28/2014 | 05/27/2014 | 05/22/2014 | 06/16/2014 |
| | | | SDG | PH209 | PH212 | PH217 | PH192 | PH201 | PH204 | PH201 | PH195 | PH234 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2 |
| | | | End Depth | | | | | | | | | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 17 U | 18 U | 34 | 17 U | 27 | 17 U | 44 | 17 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 33 U | 35 U | 33 U | 33 U | 34 U | 33 U | 41 | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 33 U | 35 U | 33 U | 33 U | 34 U | 33 U | 33 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 17 U | 18 U | 17 U | 17 U | 18 U | 17 U | 17 U | 17 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 33 U | 35 U | 33 U | 33 U | 34 U | 33 U | 33 U | 34 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-576-NBZ-SB-2.0-3.0 | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | FDG-SL-511-SA5C-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SL-569-SA6-TR-2.5 | FDG2-SL-582-NBZ-SB-3.0-3.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/10/2014 | 05/21/2014 | 06/16/2014 | 05/08/2014 | 05/28/2014 | 05/20/2014 | 05/20/2014 | 06/13/2014 |
| | | | | SDG | PH227 | PH193 | PH234 | PH173 | PH204 | PH189 | PH189 | PH233 |
| | | | | Start Depth | 2 | 2 | 2 | 2 | 2 | 2 | 2.5 | 3 |
| | | | | End Depth | 3 | 3 | 3 | 3 | | | | 3.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 18 U | 17 U | 18 U | 6.9 J Z | 18 U | 18 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 18 U | 17 U | 18 U | 8.6 J Z | 18 U | 18 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 34 U | 34 U | 34 U | 36 U | 34 U | 34 U | 36 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 34 U | 34 U | 34 U | 36 U | 34 U | 34 U | 36 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 34 U | 34 U | 34 U | 36 U | 34 U | 34 U | 36 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/28/2014 | 05/28/2014 | 05/28/2014 | 05/27/2014 | 05/23/2014 | 05/27/2014 | 05/20/2014 | 05/21/2014 |
| | | | SDG | PH204 | PH204 | PH204 | PH201 | PH199 | PH201 | PH188 | PH193 |
| | | | Start Depth | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 4 | 4 |
| | | | End Depth | | | | | | | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 35 U | 34 U | 35 U | 34 U | 34 U | 34 U | 35 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 35 U | 34 U | 35 U | 34 U | 34 U | 34 U | 35 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 35 U | 34 U | 35 U | 34 U | 34 U | 34 U | 35 U | 34 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG-SL-748-SA5C-SB-4.0-5.0 | FDG-SL-757-SA5C-SB-4.0-5.0 | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/21/2014 | 05/20/2014 | 06/11/2014 | 05/12/2014 | 05/14/2014 | 05/14/2014 | 05/14/2014 |
| | | | | SDG | PH193 | PH188 | PH229 | PH175 | PH177 | PH177 | PH177 |
| | | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 19 U | 18 U | 17 U | 18 U | 11 J Z | 19 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 37 U | 35 U | 34 U | 35 U | 36 U | 36 U | 35 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 37 U | 35 U | 34 U | 35 U | 36 U | 36 U | 35 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 19 U | 18 U | 17 U | 18 U | 19 U | 19 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 37 U | 35 U | 34 U | 35 U | 36 U | 36 U | 35 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 | SL-646-SA5C-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 | 06/04/2014 |
| | | | | SDG | PH158 | PH159 | PH158 | PH159 | PH207 | PH185 | PH185 | PH207 | PH189 | PH217 |
| | | | | Start Depth | 4 | 4 | 4 | 4 | | | | | | |
| | | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 19 U | 18 U | 6.5 J Z | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 36 U | 36 U | 36 U | 38 U | 36 U | 35 U | 38 U | 35 U | 36 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 36 U | 36 U | 36 U | 38 U | 36 U | 35 U | 38 U | 35 U | 36 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 UJ FD | 7.8 J FD, Z | 18 U | 8.6 J Z | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 19 U | 18 U | 19 U | 19 U | 18 U | 20 U | 18 U | 19 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 36 U | 36 U | 36 U | 38 U | 36 U | 35 U | 38 U | 35 U | 36 U | 34 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 | SL-570-SA6-TR-6.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | FD | FD | N | N | N |
| | | | | Sample Date | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 | 05/20/2014 |
| | | | | SDG | PH209 | PH212 | PH217 | PH192 | PH201 | PH185 | PH209 | PH195 | PH195 | PH189 |
| | | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.5 | 5.5 | 6 |
| | | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 33 U | 34 U | 34 U | 34 U | 38 U | 34 U | 36 U | 36 U | 35 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 33 U | 34 U | 34 U | 34 U | 38 U | 34 U | 36 U | 36 U | 35 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 17 U | 18 U | 18 U | 18 U | 19 U | 17 U | 19 U | 19 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 33 U | 34 U | 34 U | 34 U | 38 U | 34 U | 36 U | 36 U | 35 U |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-730-SA5A-TR-6.0 | FDG2-SL-631-SA8-SB-7.0-8.0 | SL-840-SA5B-SB-7.0-8.0 | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | FDG-SL-757-SA5C-SB-8.0-9.0 | SL-699-SA5B-TR-8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/22/2014 | 06/05/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/14/2014 | 05/28/2014 |
| | | | | SDG | PH195 | PH220 | PH158 | PH159 | PH207 | PH199 | PH177 | PH204 |
| | | | | Start Depth | 6 | 7 | 7 | 7 | 7.5 | 7.5 | 8 | 8 |
| | | | | End Depth | | 8 | 8 | 8 | | | 9 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 18 U | 20 U | 19 U | 19 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 18 U | 20 U | 19 U | 11 J Z | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 18 U | 20 U | 19 U | 19 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 18 U | 20 U | 19 U | 19 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 35 U | 40 U | 37 U | 37 U | 35 U | 34 U | 35 U | 35 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 18 U | 20 U | 19 U | 19 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 35 U | 40 U | 37 U | 37 U | 35 U | 34 U | 35 U | 35 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 18 U | 20 U | 19 U | 14 J Z | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 18 U | 20 U | 19 U | 19 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 18 U | 20 U | 19 U | 19 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 18 U | 20 U | 19 U | 19 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 35 U | 40 U | 37 U | 37 U | 35 U | 34 U | 35 U | 35 U |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-839-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/14/2014 | 01/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 |
| | | | | SDG | PH196 | PH193 | PH196 | PH177 | PH159 | PH185 | PH207 | PH209 |
| | | | | Start Depth | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 |
| | | | | End Depth | 10 | 10 | 10 | 10 | 10 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 37 U | 34 U | 35 U | 36 U | 36 U | 38 U | 36 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 37 U | 34 U | 35 U | 36 U | 36 U | 38 U | 36 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 19 U | 18 U | 18 U | 19 U | 31 | 19 U | 18 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 19 U | 18 U | 18 U | 19 U | 19 U | 19 U | 18 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 37 U | 34 U | 35 U | 36 U | 36 U | 38 U | 36 U | 34 U |

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J – Result is an estimated value
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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 | SL-529-SA5B-TR-11.0 | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/02/2014 | 05/20/2014 | 05/28/2014 | 05/21/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 |
| | | | SDG | PH212 | PH189 | PH204 | PH192 | PH188 | PH196 | PH193 | PH196 |
| | | | Start Depth | 10 | 10.5 | 11 | 11 | 12 | 13 | 14 | 14 |
| | | | End Depth | | | | | 13 | 14 | 15 | 15 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | 17 U | 9.7 J Z | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | 17 U | 11 J Z | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | 17 U | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | 17 U | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | 34 U | 36 U | 36 U | 34 U | 35 U | 35 U | 35 U | 35 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | 17 U | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | 34 U | 36 U | 36 U | 34 U | 35 U | 35 U | 35 U | 35 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | 17 U | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | 17 U | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | 17 U | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | 17 U | 19 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | 34 U | 36 U | 36 U | 34 U | 35 U | 35 U | 35 U | 35 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG-SL-756-SA5C-SB-15.0-16.0 | FDG-SL-836-SA5B-SB-15.0-16.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 | SL-839-SA5B-SB-15.5-16.5 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/13/2014 | 05/13/2014 | 05/30/2014 | 06/02/2014 | 01/14/2014 | 05/21/2014 | 05/13/2014 |
| | | | | SDG | PH176 | PH176 | PH209 | PH212 | PH159 | PH193 | PH176 |
| | | | | Start Depth | 15 | 15 | 15 | 15 | 15.5 | 19 | 19 |
| | | | | End Depth | 16 | 16 | | | 16.5 | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8082A | 11096-82-5 | Aroclor 1260 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 11097-69-1 | Aroclor 1254 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 11100-14-4 | Aroclor 1268 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 11104-28-2 | Aroclor 1221 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 11126-42-4 | Aroclor 5460 | µg/kg | | 35 U | 39 U | 34 U | 33 U | 38 U | 34 U | 34 U |
| 8082A | 11141-16-5 | Aroclor 1232 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 12642-23-8 | Aroclor 5442 | µg/kg | | 35 U | 39 U | 34 U | 33 U | 38 U | 34 U | 34 U |
| 8082A | 12672-29-6 | Aroclor 1248 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 12674-11-2 | Aroclor 1016 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 37324-23-5 | Aroclor 1262 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 53469-21-9 | Aroclor 1242 | µg/kg | | 18 U | 20 U | 18 U | 17 U | 20 U | 17 U | 18 U |
| 8082A | 63496-31-1 | Aroclor 5432 | µg/kg | | 35 U | 39 U | 34 U | 33 U | 38 U | 34 U | 34 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG-SL-1049-SA5C-SB-0.0-0.5 | FDG-SL-511-SA5C-SB-0.0-0.5 | FDG-SL-748-SA5C-SB-0.0-0.5 | FDG-SL-749-SA5C-SB-0.0-0.5 | FDG-SL-757-SA5C-SB-0.0-0.5 | SL-503-SA5C-TR-0.5 | SL-605-SA5C-TR-0.5 | SL-646-SA5C-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | FD | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/08/2014 | 05/08/2014 | 05/12/2014 | 05/08/2014 | 05/14/2014 | 05/29/2014 | 05/29/2014 | 06/04/2014 |
| | | | | SDG | PH173 | PH173 | PH175 | PH173 | PH177 | PH207 | PH207 | PH217 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0.5 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 6850 | 14797-73-0 | Perchlorate | µg/kg | 5.3 U | 5.4 U | 5.4 U | 5.3 U | 5.1 U | 5.3 U | 5.3 U | 5.1 U |

U – Compound not detected above reporting limit
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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | FDG-SL-511-SA5C-SB-2.0-3.0 | FDG-SL-748-SA5C-SB-4.0-5.0 | FDG-SL-757-SA5C-SB-4.0-5.0 | SL-503-SA5C-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-646-SA5C-TR-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/08/2014 | 05/12/2014 | 05/14/2014 | 05/29/2014 | 05/29/2014 | 06/04/2014 |
| | | | SDG | PH209 | PH212 | PH217 | PH173 | PH175 | PH177 | PH207 | PH207 | PH217 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 2 | 4 | 4 | 5 | 5 | 5 |
| | | | End Depth | | | | 3 | 5 | 5 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 6850 | 14797-73-0 | Perchlorate | µg/kg | 5.2 U | 5.1 U | 5.3 U | 5.2 U | 5.3 U | 5.5 U | 5.6 U | 5.4 U | 5.2 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-503-SA5C-TR-7.5 | FDG-SL-757-SA5C-SB-8.0-9.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 |
| | | | Sample Type | N | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/30/2014 | 05/29/2014 | 05/14/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH209 | PH212 | PH217 | PH209 | PH207 | PH177 | PH207 | PH209 | PH212 |
| | | | Start Depth | 5 | 5 | 5 | 5 | 7.5 | 8 | 10 | 10 | 10 |
| | | | End Depth | | | | | | 9 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 6850 | 14797-73-0 | Perchlorate | µg/kg | 5.2 U | 5.1 U | 5.2 U | 5.2 U | 5.3 U | 5.3 U | 5.5 U | 5.3 U | 5.2 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-756-SA5C-SB-15.0-16.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
| | | | Sample Type | N | N | N |
| | | | Sample Date | 05/13/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH176 | PH209 | PH212 |
| | | | Start Depth | 15 | 15 | 15 |
| | | | End Depth | 16 | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 6850 | 14797-73-0 | Perchlorate | µg/kg | 5.4 U | 5.3 U | 5.2 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | FD |
| | | | | Sample Date | 06/09/2014 | 06/12/2014 | 06/12/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 06/09/2014 |
| | | | | SDG | PH224 | PH231 | PH231 | PH193 | PH193 | PH193 | PH224 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.83 U | 0.24 J Z | 0.85 U | 0.85 U | 0.86 U | 0.85 U | 0.84 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.7 U | 2.1 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.7 UJ FD | 2.1 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 0.53 J FD, Z |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.83 U | 1.0 U | 0.85 U | 0.85 U | 0.86 U | 0.85 U | 0.84 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.83 U | 1.0 U | 0.85 U | 0.85 U | 0.86 U | 0.85 U | 0.84 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 1.9 U | 2.4 U | 1.3 J Z | 2.0 U | 2.0 U | 2.0 U | 1.9 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.83 U | 1.0 U | 0.85 U | 0.85 U | 0.86 U | 0.85 U | 0.84 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.7 U | 2.1 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 1.6 J Z | 2.1 U | 0.39 J Z | 12 U | 7.8 J Q | 1.7 U | 1.9 |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.8 U | 2.2 U | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 17 U | 21 U | 17 U | 19 U | 18 U | 17 U | 17 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.83 U | 0.34 J Z | 0.85 U | 0.21 J Z | 0.86 U | 0.85 U | 0.84 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.7 U | 2.1 U | 1.7 U | 2.8 U | 1.8 UJ FD | 1.7 U | 1.7 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.7 U | 2.1 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 1.7 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 6.7 U | 8.3 U | 6.9 U | 6.9 U | 7.0 U | 6.9 U | 6.8 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.7 UJ FD | 2.1 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 0.58 J FD, Z |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 0.99 J Z | 0.53 J Z | 0.44 J Z | 6.5 | 2.4 | 1.7 U | 1.2 J Z |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 0.79 J Z | 2.1 U | 1.7 U | 1.8 U | 1.8 U | 1.7 U | 0.87 J Z |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.83 U | 1.0 U | 0.85 U | 0.85 U | 0.86 U | 0.85 U | 0.84 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 33 U | 41 U | 34 U | 34 U | 34 U | 34 U | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.83 U | 1.0 U | 0.85 U | 0.85 U | 0.86 U | 0.85 U | 0.84 U |

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J – Result is an estimated value
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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-885-SA5D-SB-0.0-0.5 | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 | SL-707-SA5B-TR-0.5 | FDG2-SL-586-SA5D-SB-2.0-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | FD | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/21/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/27/2014 | 05/28/2014 | 05/27/2014 | 05/21/2014 |
| | | | | SDG | PH193 | PH217 | PH209 | PH212 | PH217 | PH201 | PH204 | PH201 | PH193 |
| | | | | Start Depth | 0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2 |
| | | | | End Depth | 0.5 | | | | | | | | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.86 U | 0.85 U | 0.87 U | 0.85 U | 0.88 U | 0.85 U | 4.3 U | 0.84 U | 0.86 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 4.6 J Z | 1.7 U | 1.8 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 8.8 U | 1.7 U | 1.8 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.86 U | 0.85 U | 0.87 U | 0.85 U | 0.88 U | 0.85 U | 4.3 U | 0.84 U | 0.86 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.86 U | 0.85 U | 0.87 U | 0.85 U | 0.88 U | 0.85 U | 4.3 U | 0.84 U | 0.86 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 2.0 U | 1.9 U | 2.0 U | 1.9 U | 1.4 J Z | 1.9 U | 9.8 U | 1.9 U | 2.0 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.86 U | 0.85 U | 0.87 U | 0.85 U | 0.88 U | 0.85 U | 4.3 U | 0.84 U | 0.86 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 8.8 U | 0.56 J Z | 1.8 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 6.1 | 1.7 U | 1.8 U | 1.7 UJ C | 1.8 U | 0.40 J Z | 5.5 J Z | 45 J Z | 1.8 U |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 1.9 U | 1.8 U | 9.3 U | 0.92 J Z | 1.9 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 18 U | 17 U | 18 U | 17 U | 18 U | 17 U | 88 U | 17 U | 18 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.86 U | 0.85 U | 0.87 U | 0.85 U | 0.88 U | 0.85 U | 4.3 U | 0.84 U | 0.86 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.2 J FD, Z | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 8.8 U | 7.0 | 1.8 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 8.8 U | 1.7 U | 1.8 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 6.9 U | 6.9 U | 7.0 U | 6.8 UJ C | 7.1 U | 6.8 U | 35 U | 6.8 U | 6.9 U |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 UJ C | 1.8 U | 1.7 U | 39 U | 1.4 J Z | 1.8 U |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.6 J Z | 1.7 U | 1.8 U | 1.7 UJ C | 1.8 U | 1.7 U | 1.8 J Z | 550 | 1.8 U |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 1.8 U | 1.7 U | 8.8 U | 1.7 U | 1.8 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.86 U | 0.85 U | 0.87 U | 0.85 U | 0.88 U | 0.85 U | 1.2 J Z | 0.84 U | 0.86 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U | 34 U | 34 U | 34 U | 35 U | 34 U | 190 U | 33 U | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.86 U | 0.85 U | 0.87 U | 0.85 U | 0.88 U | 0.85 U | 2.7 J Z | 0.84 U | 0.86 U |

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Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 | SL-707-SA5B-TR-3.0 | SL-693-SA5B-TR-3.5 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/28/2014 | 05/28/2014 | 05/27/2014 | 05/27/2014 | 05/21/2014 | 05/21/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 |
| | | | | SDG | PH204 | PH204 | PH201 | PH201 | PH193 | PH193 | PH217 | PH209 | PH212 |
| | | | | Start Depth | 3 | 3 | 3 | 3.5 | 4 | 4 | 5 | 5 | 5 |
| | | | | End Depth | | | | | 5 | 5 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.86 U | 0.88 U | 0.86 U | 0.87 U | 0.86 U | 0.93 U | 0.87 U | 0.87 U | 0.85 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.8 U | 1.1 J Z | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.86 U | 0.88 U | 0.86 U | 0.87 U | 0.86 U | 0.93 U | 0.87 U | 0.87 U | 0.85 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.86 U | 0.88 U | 0.86 U | 0.87 U | 0.86 U | 0.93 U | 0.87 U | 0.87 U | 0.85 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.1 U | 2.0 U | 2.0 U | 1.9 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.86 U | 0.88 U | 0.86 U | 0.87 U | 0.86 U | 0.93 U | 0.87 U | 0.87 U | 0.85 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 0.69 J Z | 1.8 U | 1.1 J Z | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 UJ C |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 2.0 U | 1.9 U | 1.9 U | 1.8 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 18 U | 18 U | 18 U | 18 U | 18 U | 19 U | 18 U | 18 U | 17 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.86 U | 0.88 U | 0.86 U | 0.87 U | 0.86 U | 0.93 U | 0.87 U | 0.87 U | 0.85 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 7.0 U | 3.4 J Z | 7.0 U | 7.0 U | 6.9 U | 7.5 U | 7.0 U | 7.0 U | 6.8 UJ C |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 UJ C |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.8 U | 1.8 U | 10 | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 UJ C |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.9 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.86 U | 0.54 J Z | 0.86 U | 0.87 U | 0.86 U | 0.93 U | 0.87 U | 0.87 U | 0.85 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U | 54 U | 34 U | 35 U | 34 U | 37 U | 34 U | 35 U | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.86 U | 0.39 J Z | 0.86 U | 0.87 U | 0.86 U | 0.93 U | 0.87 U | 0.87 U | 0.85 U |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-655-SA5C-TR-5.0 | SL-693-SA5B-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-699-SA5B-TR-8.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
| | | | Sample Type | N | N | FD | N | N | N | N | N |
| | | | Sample Date | 06/04/2014 | 05/27/2014 | 05/30/2014 | 05/28/2014 | 05/30/2014 | 06/02/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH217 | PH201 | PH209 | PH204 | PH209 | PH212 | PH209 | PH212 |
| | | | Start Depth | 5 | 5 | 5 | 8 | 10 | 10 | 15 | 15 |
| | | | End Depth | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8081B | 1024-57-3 | Heptachlor Epoxide | µg/kg | 0.85 U | 0.88 U | 0.87 U | 0.89 U | 0.87 U | 0.87 U | 0.88 U | 0.85 U |
| 8081B | 1031-07-8 | Endosulfan Sulfate | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 2385-85-5 | Mirex | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 309-00-2 | Aldrin | µg/kg | 0.85 U | 0.88 U | 0.87 U | 0.89 U | 0.87 U | 0.87 U | 0.88 U | 0.85 U |
| 8081B | 319-84-6 | Alpha-Bhc | µg/kg | 0.85 U | 0.88 U | 0.87 U | 0.89 U | 0.87 U | 0.87 U | 0.88 U | 0.85 U |
| 8081B | 319-85-7 | Beta-Bhc | µg/kg | 1.9 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 2.0 U | 1.9 U |
| 8081B | 319-86-8 | Delta-Bhc | µg/kg | 0.85 U | 0.88 U | 0.87 U | 0.89 U | 0.87 U | 0.87 U | 0.88 U | 0.85 U |
| 8081B | 33213-65-9 | Endosulfan II | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 50-29-3 | 4,4'-DDT | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 0.57 J Z | 1.8 UJ C | 1.8 U | 1.2 J Z, C |
| 8081B | 53494-70-5 | Endrin Ketone | µg/kg | 1.8 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.8 U |
| 8081B | 57-74-9 | Chlordane | µg/kg | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 17 U |
| 8081B | 58-89-9 | Gamma-Bhc (Lindane) | µg/kg | 0.85 U | 0.88 U | 0.87 U | 0.89 U | 0.87 U | 0.87 U | 0.88 U | 0.85 U |
| 8081B | 60-57-1 | Dieldrin | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 72-20-8 | Endrin | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 72-43-5 | Methoxychlor | µg/kg | 6.8 U | 7.1 U | 7.0 U | 7.2 U | 7.0 U | 7.0 UJ C | 7.1 U | 6.8 UJ C |
| 8081B | 72-54-8 | 4,4'-DDD | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 UJ C | 1.8 U | 1.7 UJ C |
| 8081B | 72-55-9 | 4,4'-DDE | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 UJ C | 1.8 U | 1.1 J Z, C |
| 8081B | 7421-93-4 | Endrin Aldehyde | µg/kg | 1.7 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.8 U | 1.7 U |
| 8081B | 76-44-8 | Heptachlor | µg/kg | 0.85 U | 0.88 U | 0.87 U | 0.89 U | 0.87 U | 0.87 U | 0.88 U | 0.85 U |
| 8081B | 8001-35-2 | Technical Toxaphene | µg/kg | 34 U | 35 U | 35 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8081B | 959-98-8 | Endosulfan I | µg/kg | 0.85 U | 0.88 U | 0.87 U | 0.89 U | 0.87 U | 0.87 U | 0.88 U | 0.85 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-564-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 | 06/10/2014 |
| | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 | PH227 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 9045M | pH | pH | pH | 6.29 | 6.39 | 7.92 | 7.45 | 7.83 | 8.08 | 5.92 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-566-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-574-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 | 06/12/2014 | 06/18/2014 |
| | | | SDG | PH227 | PH227 | PH235 | PH235 | PH231 | PH231 | PH237 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 9045M | pH | pH | pH | 5.96 | 6.19 | 6.73 | 6.43 | 6.35 | 5.90 | 5.92 |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-575-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 | FDG2-SL-581-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/18/2014 | 05/22/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 06/09/2014 |
| | | | SDG | PH237 | PH196 | PH196 | PH193 | PH193 | PH193 | PH224 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 9045M | pH | pH | pH | 6.41 | 7.48 | 7.18 | 8.02 | 7.24 | 6.17 | 6.26 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-874-SA5A-SB-0.0-0.5 | FDG2-SL-875-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-1049-SA5C-SB-0.0-0.5 | FDG-SL-511-SA5C-SB-0.0-0.5 | FDG-SL-748-SA5C-SB-0.0-0.5 | FDG-SL-749-SA5C-SB-0.0-0.5 |
| | | | Sample Type | N | N | FD | FD | N | N | N |
| | | | Sample Date | 05/20/2014 | 06/16/2014 | 05/21/2014 | 05/08/2014 | 05/08/2014 | 05/12/2014 | 05/08/2014 |
| | | | SDG | PH188 | PH234 | PH193 | PH173 | PH173 | PH175 | PH173 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 9045M | pH | pH | pH | 8.04 | 6.49 | 7.29 | 8.15 | 7.97 | 7.74 | 8.17 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-757-SA5C-SB-0.0-0.5 | FDG-SL-798-SA5B-SB-0.0-0.5 | FDG-SL-841-SA5B-SB-0.0-0.5 | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-838-SA5B-SB-0.0-0.5 | SL-839-SA5B-SB-0.0-0.5 | SL-840-SA5B-SB-0.0-0.5 | SL-843-SA5B-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/14/2014 | 05/07/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 |
| | | | SDG | PH177 | PH172 | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 9045M | pH | pH | pH | 8.74 | 7.81 | 8.30 | 8.59 | 7.12 | 7.08 | 6.99 | 8.63 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-503-SA5C-TR-0.5 | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/29/2014 | 05/28/2014 | 05/19/2014 | 05/19/2014 | 05/20/2014 | 05/20/2014 | 05/22/2014 | 05/29/2014 | 05/20/2014 | 05/23/2014 |
| | | | SDG | PH207 | PH204 | PH185 | PH185 | PH189 | PH189 | PH195 | PH207 | PH189 | PH199 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 9045M | pH | pH | pH | 6.32 | 8.78 | 8.35 | 8.17 | 8.43 | 7.34 | 7.79 | 7.93 | 7.95 | 8.39 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | FDG2-SL-1175-SA5A-SB-2.0-3.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/28/2014 | 05/27/2014 | 05/22/2014 | 06/16/2014 |
| | | | SDG | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 | PH204 | PH201 | PH195 | PH234 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2 |
| | | | End Depth | | | | | | | | | | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 9045M | pH | pH | pH | 7.59 | 6.70 | 6.79 | 7.77 | 6.09 | 6.85 | 4.52 | 6.46 | 6.36 | 5.86 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | FDG-SL-511-SA5C-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SL-569-SA6-TR-2.5 | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 06/16/2014 | 05/08/2014 | 05/28/2014 | 05/20/2014 | 05/20/2014 | 05/28/2014 | 05/28/2014 | 05/28/2014 |
| | | | SDG | PH193 | PH234 | PH173 | PH204 | PH189 | PH189 | PH204 | PH204 | PH204 |
| | | | Start Depth | 2 | 2 | 2 | 2 | 2 | 2.5 | 3 | 3 | 3 |
| | | | End Depth | 3 | 3 | 3 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.64 | 6.11 | 7.93 | 6.88 | 7.22 | 6.17 | 8.16 | 7.47 | 6.49 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-581-NBZ-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/27/2014 | 05/23/2014 | 05/27/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/20/2014 |
| | | | | SDG | PH201 | PH199 | PH201 | PH188 | PH196 | PH193 | PH193 | PH188 |
| | | | | Start Depth | 3 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 |
| | | | | End Depth | | | | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.58 | 8.45 | 7.31 | 7.24 | 6.56 | 7.91 | 8.24 | 7.00 | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG-SL-748-SA5C-SB-4.0-5.0 | FDG-SL-757-SA5C-SB-4.0-5.0 | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/11/2014 | 05/12/2014 | 05/14/2014 | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 |
| | | | SDG | PH229 | PH175 | PH177 | PH177 | PH177 | PH158 | PH159 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 9045M | pH | pH | pH | 6.10 | 7.52 | 8.68 | 8.52 | 8.01 | 7.32 | 7.42 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH158 | PH159 | PH207 | PH185 | PH185 | PH207 | PH189 | PH217 | PH209 | PH212 |
| | | | Start Depth | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | End Depth | 5 | 5 | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 9045M | pH | pH | pH | 5.21 | 9.00 | 8.15 | 8.81 | 8.19 | 8.29 | 7.93 | 7.09 | 7.85 | 7.92 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | FDG2-SL-631-SA8-SB-7.0-8.0 |
| | | | Sample Type | N | N | N | FD | FD | N | N | N | N | N |
| | | | Sample Date | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 | 05/20/2014 | 05/22/2014 | 06/05/2014 |
| | | | SDG | PH217 | PH192 | PH201 | PH185 | PH209 | PH195 | PH195 | PH189 | PH195 | PH220 |
| | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5.5 | 5.5 | 6 | 6 | 7 |
| | | | End Depth | | | | | | | | | | 8 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 9045M | pH | pH | pH | 8.57 | 6.18 | 7.51 | 8.11 | 7.63 | 7.72 | 7.55 | 6.54 | 5.95 | 8.01 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-840-SA5B-SB-7.0-8.0 | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | FDG-SL-757-SA5C-SB-8.0-9.0 | SL-699-SA5B-TR-8.0 | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/14/2014 | 05/28/2014 | 05/22/2014 | 05/21/2014 |
| | | | | SDG | PH158 | PH159 | PH207 | PH199 | PH177 | PH204 | PH196 | PH193 |
| | | | | Start Depth | 7 | 7 | 7.5 | 7.5 | 8 | 8 | 9 | 9 |
| | | | | End Depth | 8 | 8 | | | 9 | | 10 | 10 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 6.57 | 8.78 | 8.88 | 7.67 | 9.07 | 7.46 | 5.74 | 8.09 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-839-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 | SL-529-SA5B-TR-11.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/22/2014 | 05/14/2014 | 01/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 | 05/20/2014 | 05/28/2014 |
| | | | SDG | PH196 | PH177 | PH159 | PH185 | PH207 | PH209 | PH212 | PH189 | PH204 |
| | | | Start Depth | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10.5 | 11 |
| | | | End Depth | 10 | 10 | 10 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 9045M | pH | pH | pH | 7.98 | 8.26 | 7.88 | 8.12 | 7.68 | 8.07 | 8.15 | 8.06 | 8.61 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 | FDG-SL-756-SA5C-SB-15.0-16.0 | FDG-SL-836-SA5B-SB-15.0-16.0 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/13/2014 | 05/13/2014 |
| | | | SDG | PH192 | PH188 | PH196 | PH193 | PH196 | PH176 | PH176 |
| | | | Start Depth | 11 | 12 | 13 | 14 | 14 | 15 | 15 |
| | | | End Depth | | 13 | 14 | 15 | 15 | 16 | 16 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 9045M | pH | pH | pH | 6.96 | 6.90 | 7.38 | 8.61 | 8.36 | 7.62 | 7.82 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 | SL-839-SA5B-SB-15.5-16.5 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
| | | | Sample Type | N | N | N | N | N |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 01/14/2014 | 05/21/2014 | 05/13/2014 |
| | | | SDG | PH209 | PH212 | PH159 | PH193 | PH176 |
| | | | Start Depth | 15 | 15 | 15.5 | 19 | 19 |
| | | | End Depth | | | 16.5 | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | |
| 9045M | pH | pH | pH | 8.14 | 8.04 | 11.9 | 8.80 | 7.98 |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | FD | N | N | N | N |
| | | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/30/2014 | 05/30/2014 | 06/02/2014 | 05/30/2014 | 06/02/2014 |
| | | | | SDG | PH217 | PH209 | PH212 | PH217 | PH217 | PH209 | PH212 | PH217 | PH209 | PH209 | PH212 | PH209 | PH212 |
| | | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 5 | 5 | 5 | 5 | 10 | 10 | 15 | 15 |
| | | | | End Depth | | | | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | | | | |
| 8270D | 100-01-6 | 4-Nitroaniline | µg/kg | 170 U | 170 UJ L | 170 UJ L | 180 U | 170 U | 170 UJ L | 170 UJ L | 170 U | 170 UJ L | 180 UJ L | 170 UJ L | 180 UJ L | 170 UJ L |
| 8270D | 100-02-7 | 4-Nitrophenol | µg/kg | 510 U | 520 U | 510 U | 530 U | 520 U | 520 U | 510 U | 520 U | 520 U | 530 U | 520 U | 530 U | 520 U |
| 8270D | 100-51-6 | Benzyl Alcohol | µg/kg | 340 U | 520 U | 510 U | 350 U | 350 U | 520 U | 510 U | 340 U | 520 U | 530 U | 520 U | 530 U | 520 U |
| 8270D | 101-55-3 | 4-Bromophenyl-phenylether | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 105-67-9 | 2,4-Dimethylphenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 106-44-5 | 4-Methylphenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 106-47-8 | 4-Chloroaniline | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 108-68-9 | 3,5-Dimethylphenol | µg/kg | 170 U | 170 U | 170 U | 180 U | 170 U | 170 U | 170 U | 170 U | 170 U | 180 U | 170 U | 180 U | 170 U |
| 8270D | 108-95-2 | Phenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 110-86-1 | Pyridine | µg/kg | 170 U | 170 U | 170 U | 180 U | 170 U | 170 U | 170 U | 170 U | 170 U | 180 U | 170 U | 180 U | 170 U |
| 8270D | 111-44-4 | bis(2-chloroethyl) ether | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 111-76-2 | 2-butoxyethanol | µg/kg | 170 U | -- | -- | 180 U | 180 U | -- | -- | 180 U | -- | -- | -- | -- | -- |
| 8270D | 111-91-1 | bis(2-chloroethoxy)methane | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 118-74-1 | Hexachlorobenzene | µg/kg | 17 U | 18 U | 17 U | 18 U | 18 U | 18 U | 17 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| 8270D | 119-64-2 | Tetralin | µg/kg | 170 UJ L | -- | -- | 180 UJ L | 170 UJ L | -- | -- | 170 UJ Q, L | -- | -- | -- | -- | -- |
| 8270D | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 120-83-2 | 2,4-Dichlorophenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 122-66-7 | 1,2-Diphenylhydrazine | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 122-99-6 | 2-phenoxyethanol | µg/kg | 170 U | -- | -- | 180 U | 180 U | -- | -- | 180 U | -- | -- | -- | -- | -- |
| 8270D | 129-00-0 | Pyrene | µg/kg | -- | 5 J Z | -- | -- | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 132-64-9 | Dibenzofuran | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 191-24-2 | Benzo(g,h,i)perylene | µg/kg | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 205-99-2 | Benzo(b)fluoranthene | µg/kg | -- | 5 J Z | 5 J Z | -- | -- | 5 J Z | -- | -- | 5 J Z | 5 J Z | -- | 4 J Z | -- |
| 8270D | 206-44-0 | Fluoranthene | µg/kg | -- | 4 J Z | -- | -- | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 218-01-9 | Chrysene | µg/kg | -- | 5 J Z | -- | -- | -- | -- | -- | -- | 4 J Z | -- | -- | -- | -- |
| 8270D | 39638-32-9 | bis(2-chloroisopropyl) ether | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 50-32-8 | Benzo(a)pyrene | µg/kg | -- | 4 J Z | 4 J Z | -- | -- | 4 J Z | -- | -- | 4 J Z | 4 J Z | -- | 4 J Z | -- |
| 8270D | 51-28-5 | 2,4-Dinitrophenol | µg/kg | 670 U | 1000 U | 1000 U | 700 U | 690 U | 1000 U | 1000 U | 680 U | 1000 U | 1100 U | 1000 U | 1100 U | 1000 U |
| 8270D | 534-52-1 | 4,6-Dinitro-2-methylphenol | µg/kg | 510 U | 520 UJ L | 510 UJ L | 530 U | 520 U | 520 UJ L | 510 UJ L | 520 U | 520 UJ L | 530 UJ L | 520 UJ L | 530 UJ L | 520 UJ L |
| 8270D | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 56-55-3 | Benzo(a)anthracene | µg/kg | -- | 4 J Z | -- | -- | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 59-50-7 | 4-Chloro-3-methylphenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 621-64-7 | N-Nitroso-di-n-propylamine | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 62-53-3 | Aniline | µg/kg | 340 U | 520 U | 510 U | 350 U | 350 U | 520 U | 510 U | 340 U | 520 U | 530 U | 520 U | 530 U | 520 U |
| 8270D | 65-85-0 | Benzoic Acid | µg/kg | 510 U | 520 U | 510 U | 530 U | 520 U | 520 U | 510 U | 520 U | 520 U | 530 U | 520 U | 530 U | 520 U |
| 8270D | 67-72-1 | Hexachloroethane | µg/kg | 170 U | 170 U | 170 U | 180 U | 170 U | 170 U | 170 U | 170 U | 170 U | 180 U | 170 U | 180 U | 170 U |
| 8270D | 7005-72-3 | 4-Chlorophenyl-phenylether | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 77-47-4 | Hexachlorocyclopentadiene | µg/kg | 510 U | 520 U | 510 U | 530 U | 520 U | 520 U | 510 U | 520 U | 520 U | 530 U | 520 U | 530 U | 520 U |
| 8270D | 78-59-1 | Isophorone | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 85-01-8 | Phenanthrene | µg/kg | -- | -- | -- | -- | -- | 4 J Z | -- | -- | -- | -- | -- | -- | -- |
| 8270D | 86-30-6 | N-Nitrosodiphenylamine | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 86-74-8 | Carbazole | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 87-65-0 | 2,6-Dichlorophenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 R Q | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 87-68-3 | Hexachlorobutadiene | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 87-86-5 | Pentachlorophenol | µg/kg | 170 U | 180 U | 170 U | 180 U | 180 U | 180 U | 170 U | 180 U | 180 U | 180 U | 180 U | 180 U | 180 U |
| 8270D | 88-06-2 | 2,4,6-Trichlorophenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 88-74-4 | 2-Nitroaniline | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 88-75-5 | 2-Nitrophenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 91-58-7 | 2-Chloronaphthalene | µg/kg | 34 U | 34 U | 34 U | 35 U | 34 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 91-94-1 | 3,3'-Dichlorobenzidine | µg/kg | 340 U | 350 U | 340 U | 350 U | 350 U | 350 U | 340 U | 340 U | 350 U | 350 U | 350 U | 350 U | 340 U |
| 8270D | 92-52-4 | 1,1'-Biphenyl | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 92-87-5 | Benzidine | µg/kg | 1700 U | 3500 U | 3400 U | 1800 U | 1700 U | 3500 UJ Q | 3400 U | 1700 UJ Q | 3500 U | 3500 U | 3500 U | 3500 U | 3400 U |
| 8270D | 95-48-7 | 2-Methylphenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 95-57-8 | 2-Chlorophenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 95-95-4 | 2,4,5-Trichlorophenol | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 98-95-3 | Nitrobenzene | µg/kg | 34 U | 35 U | 34 U | 35 U | 35 U | 35 U | 34 U | 34 U | 35 U | 35 U | 35 U | 35 U | 34 U |
| 8270D | 99-09-2 | 3-Nitroaniline | µg/kg | 170 U | 170 U | 170 U | 180 U | 170 U | 170 U | 170 U | 170 U | 170 U | 180 U | 170 U | 180 U | 170 U |
| 8270D | NDPA122-39-4 | Diphenylamine | µg/kg | 170 U | 170 U | 170 U | 180 U | 170 U | 170 U | 170 U | 170 U | 170 U | 180 U | 170 U | 180 U | 170 U |

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R – Result is rejected
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Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-651-SA5C-TR-10.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | FD | N |
| | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/30/2014 | 05/30/2014 |
| | | | SDG | PH217 | PH209 | PH212 | PH217 | PH217 | PH209 | PH212 | PH217 | PH209 | PH209 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 5 | 5 | 5 | 5 | 5 | 10 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015B | 84-15-1 | o-Terphenyl | mg/kg | 0.17 U | 0.18 U | 0.17 U | 0.18 U | 0.18 U | 0.18 U | 0.17 U | 0.18 U | 0.18 U | 0.18 U |
| 8015B | 92-06-8 | m-Terphenyl | mg/kg | 0.17 U | 0.18 U | 0.17 U | 0.51 J Q | 0.18 U | 0.18 U | 0.17 U | 0.18 U | 0.18 U | 0.18 U |
| 8015B | 92-94-4 | p-Terphenyl | mg/kg | 0.17 U | 0.18 U | 0.17 U | 0.98 J Q | 0.18 U | 0.18 U | 0.17 U | 0.18 U | 0.18 U | 0.18 U |

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Trench samples collected at a discrete interval.

| | | | Sample Name | SL-653-SA5C-TR-10.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 |
|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N |
| | | | Sample Date | 06/02/2014 | 05/30/2014 | 06/02/2014 |
| | | | SDG | PH212 | PH209 | PH212 |
| | | | Start Depth | 10 | 15 | 15 |
| | | | End Depth | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | |
| 8015B | 84-15-1 | o-Terphenyl | mg/kg | 0.18 U | 0.18 U | 0.18 U |
| 8015B | 92-06-8 | m-Terphenyl | mg/kg | 0.18 U | 0.18 U | 0.18 U |
| 8015B | 92-94-4 | p-Terphenyl | mg/kg | 0.18 U | 0.18 U | 0.18 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 | FDG2-SL-564-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 | 06/10/2014 |
| | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 | PH227 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 10 U | 6.2 U | 5.1 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 3.4 J Z | 5.1 U | 5.6 | 4.1 J Z | 3.3 J Z | 5.1 U | 3.6 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 28 J Q | 4.4 J Z | 59 | 44 | 14 | 7.2 | 23 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 47 J Q | 11 | 96 | 99 | 32 | 16 | 30 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.1 U | 5.1 U | 10 U | 6.2 U | 5.1 U | 5.1 U |

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Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-566-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-571-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 | 06/12/2014 | 06/11/2014 |
| | | | SDG | PH227 | PH227 | PH235 | PH235 | PH231 | PH231 | PH229 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 2.4 J Z | 25 U | 5.1 U | 26 U | 5.0 U | 5.0 U | 11 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 6.7 | 23 J Z | 2.4 J Z | 27 | 5.0 U | 5.0 U | 11 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 45 | 210 | 16 J Q | 130 | 18 | 5.6 | 71 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 61 | 400 | 37 J Q | 260 | 37 | 12 | 140 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 6.4 | 25 U | 5.1 U | 26 U | 5.0 U | 5.0 U | 11 U |

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Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-572-NBZ-SB-0.0-0.5 | FDG2-SL-573-NBZ-SB-0.0-0.5 | FDG2-SL-574-NBZ-SB-0.0-0.5 | FDG2-SL-575-NBZ-SB-0.0-0.5 | FDG2-SL-576-NBZ-SB-0.0-0.5 | FDG2-SL-577-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/17/2014 | 06/18/2014 | 06/18/2014 | 06/18/2014 | 06/10/2014 | 06/11/2014 | 05/22/2014 |
| | | | SDG | PH235 | PH237 | PH237 | PH237 | PH227 | PH229 | PH196 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 25 U | 5.1 U | 5.0 U | 5.1 U | 5.1 U | 5.4 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 7.3 | 14 J Z | 4.2 J Z | 4.5 J Z | 2.8 J Z | 3.0 J Z | 5.4 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 62 | 100 | 25 | 20 | 18 | 18 | 5.4 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 98 | 320 | 38 | 46 | 35 | 40 | 11 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 25 U | 5.1 U | 5.0 U | 5.1 U | 5.1 U | 5.4 U |

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Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-581-NBZ-SB-0.0-0.5 | FDG2-SL-582-NBZ-SB-0.0-0.5 | FDG2-SL-583-NBZ-SB-0.0-0.5 | FDG2-SL-584-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-NBZ-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/22/2014 | 06/13/2014 | 06/12/2014 | 06/13/2014 | 05/21/2014 | 06/13/2014 | 05/21/2014 |
| | | | SDG | PH196 | PH233 | PH231 | PH233 | PH193 | PH233 | PH193 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.3 U | 5.2 U | 5.0 U | 5.0 U | 5.2 UJ C | 5.1 U | 5.3 UJ C |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 2.6 J Z | 3.7 J Z | 5.0 U | 5.0 U | 3.1 J Z, C | 3.5 J Z | 5.3 UJ FD, C |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 8.6 | 22 | 9.5 | 22 | 30 J C | 18 | 7.3 J FD, Q, C |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 21 | 73 | 23 | 36 | 48 J C | 40 | 18 J FD, Q, C |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.3 U | 5.2 U | 5.0 U | 5.0 U | 5.2 UJ C | 5.1 U | 5.3 UJ C |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-586-NBZ-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 | FDG2-SL-612-SA5D-SB-0.0-0.5 | FDG2-SL-613-SA5D-SB-0.0-0.5 | FDG2-SL-614-SA5D-SB-0.0-0.5 | FDG2-SL-623-SA8-SB-0.0-0.5 | FDG2-SL-624-SA8-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/13/2014 | 05/21/2014 | 06/10/2014 | 06/10/2014 | 06/10/2014 | 05/21/2014 | 06/05/2014 |
| | | | SDG | PH233 | PH193 | PH227 | PH227 | PH227 | PH193 | PH220 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.2 UJ C | 26 U | 5.2 U | 5.1 U | 5.4 UJ C | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 U | 5.2 UJ C | 20 J Z | 9.1 | 2.1 J Z | 2.8 J Z, C | 2.1 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 12 | 11 J C | 140 | 48 | 14 | 13 J C | 12 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 30 | 22 J C | 250 | 82 | 36 | 20 J C | 21 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.2 UJ C | 13 J Z | 2.1 J Z | 5.1 U | 5.4 UJ C | 5.1 U |

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Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-625-SA8-SB-0.0-0.5 | FDG2-SL-626-SA8-SB-0.0-0.5 | FDG2-SL-628-SA8-SB-0.0-0.5 | FDG2-SL-629-SA8-SB-0.0-0.5 | FDG2-SL-630-SA8-SB-0.0-0.5 | FDG2-SL-631-SA8-SB-0.0-0.5 | FDG2-SL-632-SA8-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/05/2014 | 06/06/2014 | 05/22/2014 | 06/11/2014 | 06/10/2014 | 06/05/2014 | 06/09/2014 |
| | | | SDG | PH220 | PH221 | PH196 | PH229 | PH227 | PH220 | PH224 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.1 U | 5.2 U | 5.1 U | 5.2 U | 5.3 U | 5.1 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 | 2.3 J Z | 4.2 J Z | 2.8 J Z | 3.3 J Z | 4.5 J Z | 5.6 |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 49 | 8.5 | 27 | 24 | 21 | 25 | 41 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 86 | 15 | 51 | 46 | 35 | 46 J Q | 63 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 3.8 J Z | 5.1 U | 5.2 U | 5.1 U | 5.2 U | 5.3 U | 5.1 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-691-SA6-SB-0.0-0.5 | FDG2-SL-692-SA6-SB-0.0-0.5 | FDG2-SL-693-SA6-SB-0.0-0.5 | FDG2-SL-694-SA6-SB-0.0-0.5 | FDG2-SL-695-SA6-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 | FDG2-SL-874-SA5A-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | FD | N |
| | | | Sample Date | 06/06/2014 | 06/06/2014 | 06/06/2014 | 06/11/2014 | 06/11/2014 | 06/09/2014 | 05/20/2014 |
| | | | SDG | PH221 | PH221 | PH221 | PH229 | PH229 | PH224 | PH188 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.0 U | 5.1 U | 5.0 U | 5.0 U | 5.0 U | 5.1 U | 5.3 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 2.2 J Z | 5.1 U | 5.0 U | 2.3 J Z | 5.0 U | 5.3 | 5.3 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 13 | 10 | 12 | 9.9 | 9.7 | 42 | 5.3 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 19 | 23 | 24 | 26 | 27 | 66 | 11 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.0 U | 5.1 U | 5.0 U | 5.0 U | 5.0 U | 5.1 U | 5.3 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | FDG2-SL-875-SA5A-SB-0.0-0.5 | FDG2-SL-876-SA5A-SB-0.0-0.5 | FDG2-SL-877-SA5A-SB-0.0-0.5 | FDG2-SL-878-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-798-SA5B-SB-0.0-0.5 | FDG-SL-841-SA5B-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | FD | N | N |
| | | | Sample Date | 06/16/2014 | 06/16/2014 | 06/16/2014 | 06/11/2014 | 05/21/2014 | 05/07/2014 | 05/14/2014 |
| | | | SDG | PH234 | PH234 | PH234 | PH229 | PH193 | PH172 | PH177 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.0 U | 10 U | 5.0 U | 5.1 U | 26 U | 5.1 U | 5.2 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.0 U | 10 U | 5.0 U | 2.3 J Z | 13 J FD, Z | 5.1 U | 5.2 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 16 | 32 | 6.7 | 24 | 150 J FD | 19 J Q | 5.2 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 58 | 90 | 17 | 53 | 350 J FD | 38 J Q | 10 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.0 U | 10 U | 5.0 U | 5.1 U | 26 U | 5.1 U | 5.2 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-838-SA5B-SB-0.0-0.5 | SL-839-SA5B-SB-0.0-0.5 | SL-840-SA5B-SB-0.0-0.5 | SL-843-SA5B-SB-0.0-0.5 | SL-503-SA5C-TR-0.5 | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/28/2014 | 05/19/2014 | 05/19/2014 |
| | | | SDG | PH177 | PH158 | PH159 | PH158 | PH159 | PH207 | PH204 | PH185 | PH185 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.2 U | 5.3 U | 5.3 U | 5.3 U | 5.6 U | 5.3 U | 5.2 U | 5.2 U | 5.5 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.2 U | 5.3 U | 5.3 U | 5.3 U | 5.6 U | 4.3 J Z | 5.2 U | 5.2 U | 5.5 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 4.9 J Z | 5.3 U | 5.3 U | 7.1 | 7.0 | 20 | 33 | 4.6 J Z | 6.0 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 9.8 J Z | 11 U | 11 U | 15 | 11 | 35 | 83 | 11 | 17 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.2 U | 5.3 U | 5.3 U | 5.3 U | 5.6 U | 5.3 U | 5.2 U | 5.2 U | 5.5 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/20/2014 | 05/20/2014 | 05/22/2014 | 05/29/2014 | 05/20/2014 | 05/23/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 |
| | | | SDG | PH189 | PH189 | PH195 | PH207 | PH189 | PH199 | PH217 | PH209 | PH212 | PH217 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.2 U | 10 U | 5.3 U | 5.4 U | 5.1 U | 5.1 U | 5.2 U | 5.1 U | 5.3 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.1 U | 5.2 U | 10 U | 2.3 J Z | 5.4 U | 5.1 U | 5.1 U | 5.2 U | 5.1 U | 5.3 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.1 U | 7.5 | 29 | 10 | 42 | 13 | 5.6 | 10 | 5.1 U | 3.5 J Z |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 10 U | 19 | 87 | 16 | 56 | 43 | 11 | 18 | 10 U | 5.0 J Z |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.2 U | 10 U | 5.3 U | 5.4 U | 5.1 U | 5.1 U | 5.2 U | 5.1 U | 5.3 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | FDG2-SL-1175-SA5A-SB-2.0-3.0 | FDG2-SL-576-NBZ-SB-2.0-3.0 | FDG2-SL-586-SA5D-SB-2.0-3.0 |
| | | | Sample Type | N | N | N | N | N | FD | N | N |
| | | | Sample Date | 05/21/2014 | 05/27/2014 | 05/28/2014 | 05/27/2014 | 05/22/2014 | 06/16/2014 | 06/10/2014 | 05/21/2014 |
| | | | SDG | PH192 | PH201 | PH204 | PH201 | PH195 | PH234 | PH227 | PH193 |
| | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 2 | 2 | 2 |
| | | | End Depth | | | | | | 3 | 3 | 3 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.1 U | 5.1 U | 7.6 | 5.1 U | 10 U | 5.1 U | 5.2 U | 5.3 UJ C |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 3.1 J Z | 5.1 U | 36 | 5.1 U | 10 U | 5.1 U | 5.2 U | 5.3 UJ C |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 30 | 6.8 | 64 | 14 | 18 | 13 J FD | 7.8 | 5.3 UJ C |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 55 | 14 | 65 | 20 | 50 | 36 J FD | 21 | 11 UJ C |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.1 U | 5.1 U | 7.9 | 5.1 U | 10 U | 5.1 U | 5.2 U | 5.3 UJ C |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-875-SA5A-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SL-569-SA6-TR-2.5 | FDG2-SL-582-NBZ-SB-3.0-3.5 | FDG2-SL-877-SA5A-SB-3.0-4.0 | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 06/16/2014 | 05/28/2014 | 05/20/2014 | 05/20/2014 | 06/13/2014 | 06/16/2014 | 05/28/2014 | 05/28/2014 | 05/28/2014 |
| | | | | SDG | PH234 | PH204 | PH189 | PH189 | PH233 | PH234 | PH204 | PH204 | PH204 |
| | | | | Start Depth | 2 | 2 | 2 | 2.5 | 3 | 3 | 3 | 3 | 3 |
| | | | | End Depth | 3 | | | | 3.5 | 4 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | | 10 U | 5.4 U | 5.3 U | 5.3 U | 5.5 U | 5.1 U | 5.4 U | 5.2 U | 5.3 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | | 10 U | 5.4 U | 5.3 U | 5.3 U | 5.5 U | 5.1 U | 5.4 U | 5.2 U | 3.3 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | | 33 J FD, Q | 10 | 5.3 U | 5.3 U | 8.1 | 5.1 U | 14 | 6.5 | 9.4 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | | 85 J FD | 14 | 11 U | 11 U | 24 | 10 U | 33 | 13 | 13 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | | 10 U | 5.4 U | 5.3 U | 5.3 U | 5.5 U | 5.1 U | 5.4 U | 5.2 U | 5.3 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-581-NBZ-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-623-SA8-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/27/2014 | 05/23/2014 | 05/27/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 |
| | | | SDG | PH201 | PH199 | PH201 | PH188 | PH196 | PH193 | PH193 | PH193 |
| | | | Start Depth | 3 | 3.5 | 3.5 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | | | | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.2 U | 5.3 U | 5.3 U | 5.4 U | 5.5 U | 5.3 UJ C | 5.7 UJ C | 5.3 UJ C |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.2 U | 5.3 U | 5.3 U | 5.4 U | 5.5 U | 5.3 UJ C | 5.7 UJ C | 5.3 UJ C |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 3.2 J Z | 4.8 J Z | 5.3 U | 11 | 5.5 U | 5.3 UJ C | 5.7 UJ C | 5.3 UJ C |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 10 U | 18 | 11 U | 21 | 11 U | 11 UJ C | 11 UJ C | 11 UJ C |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.2 U | 5.3 U | 5.3 U | 5.4 U | 5.5 U | 5.3 UJ C | 5.7 UJ C | 5.3 UJ C |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-626-SA8-SB-4.0-5.0 | FDG2-SL-628-SA8-SB-4.0-5.0 | FDG2-SL-630-SA8-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 | FDG2-SL-876-SA5A-SB-4.0-5.0 | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG2-SL-930-SA8-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N | FD |
| | | | Sample Date | 06/06/2014 | 05/22/2014 | 06/10/2014 | 05/20/2014 | 06/16/2014 | 06/11/2014 | 06/10/2014 |
| | | | SDG | PH221 | PH196 | PH227 | PH188 | PH234 | PH229 | PH227 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 6.8 | 5.6 U | 5.5 U | 5.4 U | 5.2 U | 5.1 U | 5.5 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 16 | 5.6 U | 3.7 J Q, Z | 5.4 U | 5.2 U | 5.1 U | 4.8 J Z |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 69 | 15 | 26 J Q | 16 J Q | 5.2 U | 13 | 35 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 35 | 28 | 42 J Q | 31 J Q | 10 U | 28 | 61 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.3 U | 5.6 U | 5.5 U | 5.4 U | 5.2 U | 5.1 U | 5.5 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 | FDG2-SL-631-SA8-SB-4.5-5.0 | SL-503-SA5C-TR-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 | 06/05/2014 | 05/29/2014 |
| | | | SDG | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 | PH220 | PH207 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 | 5 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.5 U | 5.3 U | 5.5 U | 5.5 U | 5.5 U | 5.7 U | 5.5 U | 5.6 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.5 U | 5.3 U | 5.5 U | 5.5 U | 5.5 U | 5.7 U | 7.5 | 5.6 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 3.7 J Z | 5.6 | 5.5 U | 5.5 U | 5.5 U | 4.8 J Z | 36 | 5.6 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 9.3 J Z | 12 | 11 U | 11 U | 11 U | 11 | 80 | 11 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.5 U | 5.3 U | 5.5 U | 5.5 U | 5.5 U | 5.7 U | 5.5 U | 5.6 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 | SL-693-SA5B-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 |
| | | | SDG | PH185 | PH185 | PH207 | PH189 | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 |
| | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.3 U | 5.8 U | 5.4 U | 5.5 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.3 U | 5.3 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.3 U | 5.8 U | 5.4 U | 5.5 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.3 U | 5.3 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.3 U | 5.8 UJ FD | 8.5 | 6.1 | 2.3 J Z | 4.6 J FD, Z | 5.1 U | 5.2 U | 5.3 U | 5.0 J Z |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 5.0 J Z | 12 UJ FD | 14 | 12 | 10 U | 8.8 J FD, Q, Z | 10 U | 10 U | 11 U | 14 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.3 U | 5.8 U | 5.4 U | 5.5 U | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.3 U | 5.3 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | FDG2-SL-630-SA8-SB-7.0-8.0 | FDG2-SL-631-SA8-SB-7.0-8.0 | SL-840-SA5B-SB-7.0-8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | FD | FD | N | N | N | N | N | N | N |
| | | | Sample Date | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 | 05/20/2014 | 05/22/2014 | 06/10/2014 | 06/05/2014 | 01/13/2014 |
| | | | SDG | PH185 | PH209 | PH195 | PH195 | PH189 | PH195 | PH227 | PH220 | PH158 |
| | | | Start Depth | 5 | 5 | 5.5 | 5.5 | 6 | 6 | 7 | 7 | 7 |
| | | | End Depth | | | | | | | 8 | 8 | 8 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.7 U | 5.2 U | 5.5 U | 5.5 U | 5.4 U | 5.4 U | 5.4 U | 6.0 U | 5.8 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.7 U | 5.2 U | 5.5 U | 5.5 U | 5.4 U | 5.4 U | 3.4 J Z | 2.9 J Z | 5.8 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 2.9 J FD, Z | 5.2 UJ FD | 5.5 U | 5.5 U | 5.4 U | 5.4 U | 24 | 8.9 | 5.8 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 15 J FD | 10 UJ FD | 11 U | 11 U | 11 U | 11 U | 50 | 14 | 12 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.7 U | 5.2 U | 5.5 U | 5.5 U | 5.4 U | 5.4 U | 5.4 U | 6.0 U | 5.8 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | Sample Name | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | SL-699-SA5B-TR-8.0 | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/28/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/14/2014 |
| | | | SDG | PH159 | PH207 | PH199 | PH204 | PH196 | PH193 | PH196 | PH177 |
| | | | Start Depth | 7 | 7.5 | 7.5 | 8 | 9 | 9 | 9 | 9 |
| | | | End Depth | 8 | | | | 10 | 10 | 10 | 10 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.6 U | 5.3 U | 5.3 U | 5.4 U | 5.6 U | 5.3 UJ C | 5.3 U | 5.5 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.6 U | 5.3 U | 5.3 U | 5.4 U | 5.6 U | 5.3 UJ C | 5.3 U | 5.5 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.1 J Z | 5.3 U | 5.3 U | 5.4 U | 5.6 U | 5.3 UJ C | 5.3 U | 5.5 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 17 | 11 U | 11 U | 11 U | 11 U | 11 UJ C | 11 U | 11 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.6 U | 5.3 U | 5.3 U | 5.4 U | 5.6 U | 5.3 UJ C | 5.3 U | 5.5 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-839-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 | SL-529-SA5B-TR-11.0 | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 01/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 | 05/20/2014 | 05/28/2014 | 05/21/2014 | 05/20/2014 |
| | | | SDG | PH159 | PH185 | PH207 | PH209 | PH212 | PH189 | PH204 | PH192 | PH188 |
| | | | Start Depth | 9 | 10 | 10 | 10 | 10 | 10.5 | 11 | 11 | 12 |
| | | | End Depth | 10 | | | | | | | | 13 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.5 U | 5.7 U | 5.5 U | 5.3 U | 5.2 U | 5.6 U | 11 U | 5.2 U | 5.4 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.5 U | 5.7 U | 5.5 U | 5.3 U | 5.2 U | 5.6 U | 7.9 J Z | 5.2 U | 5.4 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 4.2 J Z | 5.7 U | 3.5 J Z | 3.2 J Z | 5.2 U | 8.1 | 49 | 5.2 U | 5.4 U |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 12 | 11 U | 8.4 J Z | 11 U | 10 U | 13 | 110 | 10 U | 11 U |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.5 U | 5.7 U | 5.5 U | 5.3 U | 5.2 U | 5.6 U | 11 U | 5.2 U | 5.4 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 | FDG-SL-836-SA5B-SB-15.0-16.0 | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 | SL-839-SA5B-SB-15.5-16.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/13/2014 | 05/30/2014 | 06/02/2014 | 01/14/2014 |
| | | | SDG | PH196 | PH193 | PH196 | PH176 | PH209 | PH212 | PH159 |
| | | | Start Depth | 13 | 14 | 14 | 15 | 15 | 15 | 15.5 |
| | | | End Depth | 14 | 15 | 15 | 16 | | | 16.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.4 U | 5.3 UJ C | 5.3 U | 5.9 U | 5.3 U | 5.2 U | 5.8 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.4 U | 5.3 UJ C | 5.3 U | 5.9 U | 5.3 U | 5.2 U | 5.8 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.4 U | 5.3 UJ C | 4.1 J Z | 3.4 J Z | 5.3 U | 6.3 | 4.6 J Z |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 11 U | 11 UJ C | 11 U | 12 U | 11 U | 9.1 J Z | 7.4 J Z |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.4 U | 5.3 UJ C | 5.3 U | 5.9 U | 5.3 U | 5.2 U | 4.5 J Z |

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Trench samples collected at a discrete interval.

| | | | | | |
|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
| | | | Sample Type | N | N |
| | | | Sample Date | 05/21/2014 | 05/13/2014 |
| | | | SDG | PH193 | PH176 |
| | | | Start Depth | 19 | 19 |
| | | | End Depth | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | |
| 8015M | PHCC12C14 | EFH (C12-C14) | mg/kg | 5.2 UJ C | 26 U |
| 8015M | PHCC15C20 | EFH (C15-C20) | mg/kg | 5.2 UJ C | 26 U |
| 8015M | PHCC21C30 | EFH (C21-C30) | mg/kg | 5.2 UJ C | 130 |
| 8015M | PHCC30C40 | EFH (C30-C40) | mg/kg | 10 UJ C | 310 |
| 8015M | PHCC8C11 | EFH (C8-C11) | mg/kg | 5.2 UJ C | 26 U |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-558-NBZ-SB-0.0-0.5 | FDG2-SL-559-NBZ-SB-0.0-0.5 | FDG2-SL-560-NBZ-SB-0.0-0.5 | FDG2-SL-561-NBZ-SB-0.0-0.5 | FDG2-SL-562-NBZ-SB-0.0-0.5 | FDG2-SL-563-NBZ-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N |
| | | | | Sample Date | 06/09/2014 | 06/09/2014 | 06/11/2014 | 05/23/2014 | 06/12/2014 | 06/12/2014 |
| | | | | SDG | PH224 | PH224 | PH229 | PH197 | PH231 | PH231 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | | 5.1 UJ S, L | 5.1 UJ L | 5.1 UJ L | 5.0 U | 6.2 UJ L | 5.1 UJ L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | | 5.1 UJ S, L | 5.1 UJ L | 5.1 UJ L | 5.0 U | 6.2 UJ L | 5.1 UJ L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | | 4.1 J S, L, Z | 5.1 UJ L | 12 J L | 16 | 2.6 J L, Z | 5.1 UJ L |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | | 10 UJ FD, S | 10 U | 5.0 J Z | 7.2 J Z | 12 U | 10 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | | 5.1 UJ S, Q, L | 5.1 UJ L | 5.1 UJ L | 5.0 U | 6.2 UJ L | 5.1 UJ L |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-564-NBZ-SB-0.0-0.5 | FDG2-SL-565-NBZ-SB-0.0-0.5 | FDG2-SL-566-NBZ-SB-0.0-0.5 | FDG2-SL-567-NBZ-SB-0.0-0.5 | FDG2-SL-568-NBZ-SB-0.0-0.5 | FDG2-SL-569-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/10/2014 | 06/17/2014 | 06/17/2014 | 06/12/2014 |
| | | | SDG | PH227 | PH227 | PH227 | PH235 | PH235 | PH231 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 UJ L | 5.1 UJ L | 5.1 U | 5.3 UJ L | 5.0 UJ S, L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 UJ L | 5.5 J L | 5.1 U | 5.3 UJ L | 5.0 UJ S, L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 2.5 J L, Z | 3.3 J L, Z | 61 J L | 3.1 J Z | 4.9 J L, Z | 5.0 UJ S, L |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 4.4 J Z | 4.8 J Z | 100 | 10 U | 8.3 J L, Z | 10 UJ S |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 UJ L | 5.1 UJ L | 5.1 U | 5.3 UJ L | 5.0 UJ S, L |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-570-NBZ-SB-0.0-0.5 | FDG2-SL-571-NBZ-SB-0.0-0.5 | FDG2-SL-572-NBZ-SB-0.0-0.5 | FDG2-SL-573-NBZ-SB-0.0-0.5 | FDG2-SL-574-NBZ-SB-0.0-0.5 | FDG2-SL-575-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N |
| | | | Sample Date | 06/12/2014 | 06/11/2014 | 06/17/2014 | 06/18/2014 | 06/18/2014 | 06/18/2014 |
| | | | SDG | PH231 | PH229 | PH235 | PH237 | PH237 | PH237 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.0 UJ L | 5.3 UJ L | 5.0 U | 5.0 U | 5.1 U | 5.0 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.0 UJ L | 5.3 UJ L | 5.0 U | 5.0 U | 5.1 U | 5.0 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.0 UJ L | 12 J L | 14 | 27 | 3.9 J Z | 9.8 |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 10 U | 10 J Z | 14 | 56 | 5.7 J Z | 16 |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.0 UJ L | 5.3 UJ L | 5.0 U | 5.0 U | 5.1 U | 5.0 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-576-NBZ-SB-0.0-0.5 | FDG2-SL-577-NBZ-SB-0.0-0.5 | FDG2-SL-578-NBZ-SB-0.0-0.5 | FDG2-SL-581-NBZ-SB-0.0-0.5 | FDG2-SL-582-NBZ-SB-0.0-0.5 | FDG2-SL-583-NBZ-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/11/2014 | 05/22/2014 | 05/22/2014 | 06/13/2014 | 06/12/2014 |
| | | | SDG | PH227 | PH229 | PH196 | PH196 | PH233 | PH231 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 UJ L | 5.4 U | 5.3 U | 5.2 UJ L | 5.0 UJ L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 UJ L | 5.4 U | 5.3 U | 5.2 UJ L | 5.0 UJ L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 3.1 J L, Z | 2.1 J L, Z | 5.4 U | 5.3 U | 3.0 J L, Z | 5.0 UJ L |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 10 U | 10 U | 11 U | 11 U | 6.2 J Z | 10 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 UJ L | 5.4 U | 5.3 U | 5.2 UJ L | 5.0 UJ L |

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Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-584-NBZ-SB-0.0-0.5 | FDG2-SL-584-SA5D-SB-0.0-0.5 | FDG2-SL-585-NBZ-SB-0.0-0.5 | FDG2-SL-585-SA5D-SB-0.0-0.5 | FDG2-SL-586-NBZ-SB-0.0-0.5 | FDG2-SL-586-SA5D-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N |
| | | | Sample Date | 06/13/2014 | 05/21/2014 | 06/13/2014 | 05/21/2014 | 06/13/2014 | 05/21/2014 |
| | | | SDG | PH233 | PH193 | PH233 | PH193 | PH233 | PH193 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.0 UJ S, L | 5.2 U | 5.1 UJ S, L | 5.3 U | 5.1 UJ S, L | 5.2 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.0 UJ S, L | 5.2 U | 5.1 UJ S, L | 5.3 U | 5.1 UJ S, L | 5.2 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 6.8 J S, L | 21 | 5.1 UJ S, L | 2.7 J FD, Q, Z | 5.1 UJ S, L | 5.2 U |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 10 UJ S | 25 | 10 UJ S | 5.7 J FD, Q, Z | 10 UJ S | 10 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.0 UJ S, L | 5.2 U | 5.1 UJ S, L | 5.3 U | 5.1 UJ S, L | 5.2 U |

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Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-612-SA5D-SB-0.0-0.5 | FDG2-SL-613-SA5D-SB-0.0-0.5 | FDG2-SL-614-SA5D-SB-0.0-0.5 | FDG2-SL-623-SA8-SB-0.0-0.5 | FDG2-SL-624-SA8-SB-0.0-0.5 | FDG2-SL-625-SA8-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N |
| | | | Sample Date | 06/10/2014 | 06/10/2014 | 06/10/2014 | 05/21/2014 | 06/05/2014 | 06/05/2014 |
| | | | SDG | PH227 | PH227 | PH227 | PH193 | PH220 | PH220 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.2 UJ L | 5.1 UJ L | 5.4 U | 5.1 UJ L | 5.1 UJ L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.2 UJ L | 5.1 UJ L | 5.4 U | 5.1 UJ L | 5.1 UJ L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 10 J L | 2.2 J L, Z | 2.8 J L, Z | 5.4 U | 5.1 U | 3.9 J Z |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 26 | 4.2 J Z | 8.2 J Z | 11 U | 10 U | 8.3 J Z |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.2 UJ L | 5.1 UJ L | 5.4 U | 5.1 UJ L | 5.1 UJ L |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-626-SA8-SB-0.0-0.5 | FDG2-SL-628-SA8-SB-0.0-0.5 | FDG2-SL-629-SA8-SB-0.0-0.5 | FDG2-SL-630-SA8-SB-0.0-0.5 | FDG2-SL-631-SA8-SB-0.0-0.5 | FDG2-SL-632-SA8-SB-0.0-0.5 | FDG2-SL-691-SA6-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 06/06/2014 | 05/22/2014 | 06/11/2014 | 06/10/2014 | 06/05/2014 | 06/09/2014 | 06/06/2014 |
| | | | SDG | PH221 | PH196 | PH229 | PH227 | PH220 | PH224 | PH221 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.2 U | 5.1 UJ L | 5.2 UJ L | 5.3 UJ L | 5.1 UJ S, L | 5.0 UJ L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.2 U | 5.1 UJ L | 5.2 UJ L | 5.3 UJ L | 5.1 UJ S, L | 5.0 UJ L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.1 U | 3.9 J Z | 3.8 J L, Z | 3.3 J L, Z | 2.3 J Z | 4.2 J S, L, Z | 5.0 U |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 10 U | 5.5 J Z | 10 U | 5.2 J Z | 4.6 J Z | 4.3 J S, Z | 10 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.2 U | 5.1 UJ L | 5.2 UJ L | 5.3 UJ L | 5.1 UJ S, L | 5.0 UJ L |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-692-SA6-SB-0.0-0.5 | FDG2-SL-693-SA6-SB-0.0-0.5 | FDG2-SL-694-SA6-SB-0.0-0.5 | FDG2-SL-695-SA6-SB-0.0-0.5 | FDG2-SL-858-NBZ-SB-0.0-0.5 | FDG2-SL-874-SA5A-SB-0.0-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | FD | N |
| | | | | Sample Date | 06/06/2014 | 06/06/2014 | 06/11/2014 | 06/11/2014 | 06/09/2014 | 05/20/2014 |
| | | | | SDG | PH221 | PH221 | PH229 | PH229 | PH224 | PH188 |
| | | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | | 5.1 UJ L | 5.0 UJ L | 5.0 UJ L | 5.0 UJ L | 5.1 UJ S, L | 5.3 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | | 5.1 UJ L | 5.0 UJ L | 5.0 UJ L | 5.0 UJ L | 5.1 UJ S, L | 5.3 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | | 5.1 U | 3.4 J Z | 5.0 UJ L | 5.0 UJ L | 5.0 J S, L, Z | 5.3 U |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | | 10 U | 10 U | 10 U | 10 U | 5.4 J FD, S, Z | 11 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | | 5.1 UJ L | 5.0 UJ L | 5.0 UJ L | 5.0 UJ L | 5.1 UJ S, L | 5.3 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-875-SA5A-SB-0.0-0.5 | FDG2-SL-876-SA5A-SB-0.0-0.5 | FDG2-SL-877-SA5A-SB-0.0-0.5 | FDG2-SL-878-SA5A-SB-0.0-0.5 | FDG2-SL-885-SA5D-SB-0.0-0.5 | FDG-SL-798-SA5B-SB-0.0-0.5 |
| | | | Sample Type | N | N | N | N | FD | N |
| | | | Sample Date | 06/16/2014 | 06/16/2014 | 06/16/2014 | 06/11/2014 | 05/21/2014 | 05/07/2014 |
| | | | SDG | PH234 | PH234 | PH234 | PH229 | PH193 | PH172 |
| | | | Start Depth | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | End Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.0 U | 5.0 U | 5.0 UJ L | 5.1 UJ L | 10 U | 5.1 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.0 U | 5.0 U | 5.0 UJ L | 5.1 UJ L | 10 U | 5.1 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.8 | 16 | 5.0 UJ L | 6.5 J L | 55 J FD | 8.5 J Q |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 17 | 25 | 10 UJ L | 4.6 J Z | 100 J FD | 8.9 J Q, Z |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.0 U | 5.0 U | 5.0 UJ L | 5.1 UJ L | 10 U | 5.1 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG-SL-841-SA5B-SB-0.0-0.5 | FDG-SL-842-SA5B-SB-0.0-0.5 | SL-503-SA5C-TR-0.5 | SL-529-SA5B-TR-0.5 | SL-534-SA8-TR-0.5 | SL-548-SA8-TR-0.5 | SL-569-SA6-TR-0.5 | SL-570-SA6-TR-0.5 | SL-587-SA5A-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/14/2014 | 05/14/2014 | 05/29/2014 | 05/28/2014 | 05/19/2014 | 05/19/2014 | 05/20/2014 | 05/20/2014 | 05/22/2014 |
| | | | | SDG | PH177 | PH177 | PH207 | PH204 | PH185 | PH185 | PH189 | PH189 | PH195 |
| | | | | Start Depth | 0 | 0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | | End Depth | 0.5 | 0.5 | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.2 UJ L | 5.2 UJ L | 5.3 UJ L | 5.2 UJ L | 5.2 UJ L | 5.5 UJ S, L | 5.1 U | 5.2 U | 5.2 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.2 UJ L | 5.2 UJ L | 5.3 UJ L | 5.2 UJ L | 5.2 UJ L | 5.5 UJ S, L | 5.1 U | 5.2 U | 5.2 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.2 UJ L | 2.3 J L, Z | 5.3 UJ L | 18 J L | 5.2 UJ L | 5.5 UJ S, L | 5.1 U | 5.2 U | 15 |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 10 U | 10 U | 11 U | 40 | 10 U | 11 UJ S | 10 U | 10 U | 37 |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.2 UJ L | 5.2 UJ L | 5.3 UJ L | 5.2 UJ L | 5.2 UJ L | 5.5 UJ S, L | 5.1 U | 5.2 U | 5.2 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-605-SA5C-TR-0.5 | SL-611-SA8-TR-0.5 | SL-636-SA5A-TR-0.5 | SL-646-SA5C-TR-0.5 | SL-651-SA5C-TR-0.5 | SL-653-SA5C-TR-0.5 | SL-655-SA5C-TR-0.5 | SL-686-SA6-TR-0.5 | SL-693-SA5B-TR-0.5 | SL-699-SA5B-TR-0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/29/2014 | 05/20/2014 | 05/23/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/28/2014 |
| | | | | SDG | PH207 | PH189 | PH199 | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 | PH204 |
| | | | | Start Depth | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | | 5.3 UJ S, L | 5.4 U | 5.1 U | 5.1 UJ L | 5.2 U | 5.1 U | 5.3 UJ L | 5.1 U | 5.1 UJ S, L | 4.6 J L, Z |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | | 5.3 UJ S, L | 5.4 U | 5.1 U | 5.1 UJ L | 5.2 U | 5.1 U | 5.3 UJ L | 5.1 U | 5.1 UJ S, L | 16 J L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | | 3.9 J S, L, Z | 29 | 6.0 | 5.1 U | 5.2 U | 5.1 U | 5.3 U | 12 | 5.1 UJ S, L | 23 J L |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | | 5.1 J S, Z | 30 | 14 | 10 U | 10 U | 10 U | 11 U | 10 | 10 UJ S | 22 |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | | 5.3 UJ S, L | 5.4 U | 5.1 U | 5.1 UJ L | 5.2 UJ L | 5.1 UJ L | 5.3 UJ L | 5.1 U | 5.1 UJ S, L | 5.6 J L |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-707-SA5B-TR-0.5 | SL-730-SA5A-TR-0.5 | FDG2-SL-1175-SA5A-SB-2.0-3.0 | FDG2-SL-576-NBZ-SB-2.0-3.0 | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N |
| | | | | Sample Date | 05/27/2014 | 05/22/2014 | 06/16/2014 | 06/10/2014 | 05/21/2014 | 06/16/2014 | 05/28/2014 | 05/20/2014 |
| | | | | SDG | PH201 | PH195 | PH234 | PH227 | PH193 | PH234 | PH204 | PH189 |
| | | | | Start Depth | 0.5 | 0.5 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | End Depth | | | 3 | 3 | 3 | 3 | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 U | 5.1 U | 5.2 UJ L | 5.3 U | 5.1 U | 5.4 UJ S, L | 5.3 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 U | 5.1 U | 5.2 UJ L | 5.3 U | 5.1 U | 5.4 UJ S, L | 5.3 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.1 UJ L | 2.1 J Z | 3.6 J FD, Z | 5.2 UJ L | 5.3 U | 26 J FD, Q | 3.2 J S, L, Z | 5.3 U |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 10 U | 10 U | 14 J FD | 10 U | 11 U | 67 J FD | 5.2 J S, Z | 11 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.1 UJ L | 5.1 U | 5.1 U | 5.2 UJ L | 5.3 U | 5.1 U | 5.4 UJ S, L | 5.3 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-569-SA6-TR-2.5 | FDG2-SL-582-NBZ-SB-3.0-3.5 | FDG2-SL-877-SA5A-SB-3.0-4.0 | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/20/2014 | 06/13/2014 | 06/16/2014 | 05/28/2014 | 05/28/2014 | 05/28/2014 | 05/27/2014 | 05/23/2014 | 05/27/2014 |
| | | | SDG | PH189 | PH233 | PH234 | PH204 | PH204 | PH204 | PH201 | PH199 | PH201 |
| | | | Start Depth | 2.5 | 3 | 3 | 3 | 3 | 3 | 3 | 3.5 | 3.5 |
| | | | End Depth | | 3.5 | 4 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.3 U | 5.5 UJ S, L | 5.1 U | 5.4 UJ L | 5.2 UJ S, L | 5.3 UJ L | 5.2 UJ L | 5.3 U | 5.3 UJ L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.3 U | 5.5 UJ S, L | 5.1 U | 5.4 UJ L | 5.2 UJ S, L | 5.3 UJ L | 5.2 UJ L | 5.3 U | 5.3 UJ L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.3 U | 5.5 UJ S, L | 5.1 U | 7.7 J L | 5.2 UJ S, L | 5.3 UJ L | 5.2 UJ L | 5.3 U | 5.3 UJ L |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 11 U | 11 UJ S | 10 U | 16 | 10 UJ S | 11 U | 10 U | 11 U | 11 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.3 U | 5.5 UJ S, L | 5.1 U | 5.4 UJ L | 5.2 UJ S, L | 5.3 UJ L | 5.2 UJ L | 5.3 U | 5.3 UJ L |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-581-NBZ-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-623-SA8-SB-4.0-5.0 | FDG2-SL-626-SA8-SB-4.0-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 06/06/2014 |
| | | | | SDG | PH188 | PH196 | PH193 | PH193 | PH193 | PH221 |
| | | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.4 U | 5.5 U | 5.3 U | 5.7 U | 5.3 U | 3.3 J L, Z |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.4 U | 5.5 U | 5.3 U | 5.7 U | 5.3 U | 5.1 J L, Z |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.4 U | 5.5 U | 5.3 U | 5.7 U | 5.3 U | 5.3 U |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.4 U | 5.5 U | 5.3 U | 5.7 U | 5.3 U | 5.3 UJ L |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-628-SA8-SB-4.0-5.0 | FDG2-SL-630-SA8-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 | FDG2-SL-876-SA5A-SB-4.0-5.0 | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG2-SL-930-SA8-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | FD |
| | | | Sample Date | 05/22/2014 | 06/10/2014 | 05/20/2014 | 06/16/2014 | 06/11/2014 | 06/10/2014 |
| | | | SDG | PH196 | PH227 | PH188 | PH234 | PH229 | PH227 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.6 U | 5.5 UJ L | 5.4 U | 5.2 U | 5.1 UJ L | 5.5 UJ L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.6 U | 5.5 UJ L | 5.4 U | 5.2 U | 5.1 UJ L | 5.5 UJ L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 3.7 J Z | 14 J Q, L | 5.4 U | 5.2 U | 2.1 J L, Z | 19 J L |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 4.6 J Z | 14 J Q | 11 U | 10 U | 10 U | 21 |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.6 U | 5.5 UJ L | 5.4 U | 5.2 U | 5.1 UJ L | 5.5 UJ L |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 | FDG2-SL-631-SA8-SB-4.5-5.0 | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/14/2014 | 05/14/2014 | 06/05/2014 | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 |
| | | | | SDG | PH177 | PH177 | PH220 | PH207 | PH185 | PH185 | PH207 | PH189 |
| | | | | Start Depth | 4 | 4 | 4.5 | | | | | |
| | | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.5 UJ L | 5.3 UJ S, L | 5.5 UJ L | 5.6 UJ S, L | 5.3 UJ L | 5.8 UJ S, L | 5.4 UJ L | 5.5 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.5 UJ L | 5.3 UJ S, L | 5.5 UJ L | 5.6 UJ S, L | 5.3 UJ L | 5.8 UJ S, L | 5.4 UJ L | 5.5 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.5 UJ L | 5.3 UJ S, L | 3.0 J Z | 5.6 UJ S, L | 5.3 UJ L | 5.8 UJ S, L | 3.5 J L, Z | 5.5 U |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 11 U | 11 UJ S | 7.4 J Z | 11 UJ S | 11 U | 12 UJ S | 5.0 J Z | 11 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.5 UJ L | 5.3 UJ S, L | 5.5 UJ L | 5.6 UJ S, L | 5.3 UJ L | 5.8 UJ S, L | 5.4 UJ L | 5.5 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | FD | FD | N | N |
| | | | | Sample Date | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 |
| | | | | SDG | PH217 | PH209 | PH212 | PH217 | PH192 | PH201 | PH185 | PH209 | PH195 | PH195 |
| | | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.5 | 5.5 |
| | | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.2 UJ L | 5.2 U | 5.1 U | 5.2 UJ L | 5.3 U | 5.3 UJ L | 5.7 UJ S, L | 5.2 U | 5.5 U | 5.5 U |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.2 UJ L | 5.2 U | 5.1 U | 5.2 UJ L | 5.3 U | 5.3 UJ L | 5.7 UJ S, L | 5.2 U | 5.5 U | 5.5 U |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.2 U | 5.2 U | 5.1 U | 5.2 U | 5.3 U | 5.3 UJ L | 5.7 UJ S, L | 5.2 U | 5.5 U | 5.5 U |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 10 U | 10 U | 10 U | 10 U | 11 U | 11 U | 11 UJ S | 10 U | 11 U | 11 U |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.2 UJ L | 5.2 UJ L | 5.1 UJ L | 5.2 UJ L | 5.3 U | 5.3 UJ L | 5.7 UJ S, L | 5.2 UJ L | 5.5 U | 5.5 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | FDG2-SL-630-SA8-SB-7.0-8.0 | FDG2-SL-631-SA8-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | SL-699-SA5B-TR-8.0 | FDG2-SL-581-NBZ-SB-9.0-10.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 05/22/2014 | 06/10/2014 | 06/05/2014 | 05/29/2014 | 05/23/2014 | 05/28/2014 | 05/22/2014 |
| | | | | SDG | PH189 | PH195 | PH227 | PH220 | PH207 | PH199 | PH204 | PH196 |
| | | | | Start Depth | 6 | 6 | 7 | 7 | 7.5 | 7.5 | 8 | 9 |
| | | | | End Depth | | | 8 | 8 | | | | 10 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.4 U | 5.4 U | 5.4 UJ L | 6.0 UJ L | 5.3 UJ S, L | 5.3 U | 5.4 UJ L | 5.6 UJ S |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.4 U | 5.4 U | 5.4 UJ L | 6.0 UJ L | 5.3 UJ S, L | 5.3 U | 5.4 UJ L | 5.6 UJ S |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.4 U | 5.4 U | 8.8 J L | 6.0 U | 5.3 UJ S, L | 5.3 U | 5.4 UJ L | 5.6 UJ S |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 11 U | 11 U | 11 | 12 U | 11 UJ S | 11 U | 11 U | 11 UJ S |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.4 U | 5.4 U | 5.4 UJ L | 6.0 UJ L | 5.3 UJ S, L | 5.3 U | 5.4 UJ L | 5.6 UJ S |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-623-SA8-SB-9.0-10.0 | FDG2-SL-628-SA8-SB-9.0-10.0 | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 05/22/2014 | 05/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 | 05/20/2014 |
| | | | SDG | PH193 | PH196 | PH177 | PH185 | PH207 | PH209 | PH212 | PH189 |
| | | | Start Depth | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10.5 |
| | | | End Depth | 10 | 10 | 10 | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.3 U | 5.3 U | 5.5 UJ L | 5.7 UJ S, L | 5.5 UJ S, L | 5.3 U | 5.2 U | 5.6 UJ S |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.3 U | 5.3 U | 5.5 UJ L | 5.7 UJ S, L | 5.5 UJ S, L | 5.3 U | 5.2 U | 5.6 UJ S |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.3 U | 5.3 U | 5.5 UJ L | 5.7 UJ S, L | 5.5 UJ S, L | 5.3 U | 5.2 U | 5.6 UJ S |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 11 U | 11 U | 11 U | 11 UJ S | 11 UJ S | 11 U | 10 U | 11 UJ S |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.3 U | 5.3 U | 5.5 UJ L | 5.7 UJ S, L | 5.5 UJ S, L | 5.3 UJ L | 5.2 UJ L | 5.6 UJ S |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SL-529-SA5B-TR-11.0 | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 | FDG-SL-836-SA5B-SB-15.0-16.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/28/2014 | 05/21/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/13/2014 |
| | | | | SDG | PH204 | PH192 | PH188 | PH196 | PH193 | PH196 | PH176 |
| | | | | Start Depth | 11 | 11 | 12 | 13 | 14 | 14 | 15 |
| | | | | End Depth | | | 13 | 14 | 15 | 15 | 16 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.5 UJ L | 5.2 U | 5.4 U | 5.4 U | 5.3 U | 5.3 U | 5.9 UJ S, L | |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 4.6 J L, Z | 5.2 U | 5.4 U | 5.4 U | 5.3 U | 5.3 U | 5.9 UJ S, L | |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 28 J L | 5.2 U | 5.4 U | 5.4 U | 5.3 U | 2.4 J Z | 5.9 UJ S, L | |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 58 | 10 U | 11 U | 11 U | 11 U | 11 U | 12 UJ S | |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.5 UJ L | 5.2 U | 5.4 U | 5.4 U | 5.3 U | 5.3 U | 5.9 UJ S, L | |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-651-SA5C-TR-15.0 | SL-653-SA5C-TR-15.0 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
| | | | Sample Type | N | N | N | N |
| | | | Sample Date | 05/30/2014 | 06/02/2014 | 05/21/2014 | 05/13/2014 |
| | | | SDG | PH209 | PH212 | PH193 | PH176 |
| | | | Start Depth | 15 | 15 | 19 | 19 |
| | | | End Depth | | | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | |
| 8015M | PHCC12C14SILICA | EFH (C12-C14) w/ Silica Gel | mg/kg | 5.3 U | 5.2 U | 5.2 U | 11 UJ L |
| 8015M | PHCC15C20SILICA | EFH (C15-C20) w/ Silica Gel | mg/kg | 5.3 U | 5.2 U | 5.2 U | 15 J L |
| 8015M | PHCC21C30SILICA | EFH (C21-C30) w/ Silica Gel | mg/kg | 5.3 U | 5.2 U | 5.2 U | 94 J L |
| 8015M | PHCC30C40SILICA | EFH (C30-C40) w/ Silica Gel | mg/kg | 11 U | 10 U | 10 U | 210 |
| 8015M | PHCC8C11SILICA | EFH (C8-C11) w/ Silica Gel | mg/kg | 5.3 UJ L | 5.2 UJ L | 5.2 U | 11 UJ L |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-1175-SA5A-SB-2.0-3.0 | FDG2-SL-576-NBZ-SB-2.0-3.0 | FDG2-SL-586-SA5D-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | SL-529-SA5B-TR-2.0 | SL-570-SA6-TR-2.0 | SL-569-SA6-TR-2.5 |
| | | | Sample Type | FD | N | N | N | N | N | N |
| | | | Sample Date | 06/16/2014 | 06/10/2014 | 05/21/2014 | 06/16/2014 | 05/28/2014 | 05/20/2014 | 05/20/2014 |
| | | | SDG | PH234 | PH227 | PH193 | PH234 | PH204 | PH189 | PH189 |
| | | | Start Depth | 2 | 2 | 2 | 2 | 2 | 2 | 2.5 |
| | | | End Depth | 3 | 3 | 3 | 3 | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.0 U | 1.3 U | 1.0 U | 1.1 U | 1.0 U | 1 U | 0.9 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-582-NBZ-SB-3.0-3.5 | FDG2-SL-877-SA5A-SB-3.0-4.0 | SL-529-SA5B-TR-3.0 | SL-693-SA5B-TR-3.0 | SL-699-SA5B-TR-3.0 | SL-707-SA5B-TR-3.0 | SL-636-SA5A-TR-3.5 | SL-693-SA5B-TR-3.5 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 06/13/2014 | 06/16/2014 | 05/28/2014 | 05/28/2014 | 05/28/2014 | 05/27/2014 | 05/23/2014 | 05/27/2014 |
| | | | SDG | PH233 | PH234 | PH204 | PH204 | PH204 | PH201 | PH199 | PH201 |
| | | | Start Depth | 3 | 3 | 3 | 3 | 3 | 3 | 3.5 | 3.5 |
| | | | End Depth | 3.5 | 4 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.1 U | 1.0 U | 9.4 U | 1.3 U | 1 U | 1.1 U | 1 U | 1.2 U |

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R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-1174-SA5A-SB-4.0-5.0 | FDG2-SL-581-NBZ-SB-4.0-5.0 | FDG2-SL-584-SA5D-SB-4.0-5.0 | FDG2-SL-585-SA5D-SB-4.0-5.0 | FDG2-SL-623-SA8-SB-4.0-5.0 | FDG2-SL-626-SA8-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | N |
| | | | Sample Date | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/21/2014 | 05/21/2014 | 06/06/2014 |
| | | | SDG | PH188 | PH196 | PH193 | PH193 | PH193 | PH221 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1 U | 1.1 U | 1 U | 1.1 U | 1.0 U | 1.1 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG2-SL-628-SA8-SB-4.0-5.0 | FDG2-SL-630-SA8-SB-4.0-5.0 | FDG2-SL-874-SA5A-SB-4.0-5.0 | FDG2-SL-876-SA5A-SB-4.0-5.0 | FDG2-SL-878-SA5A-SB-4.0-5.0 | FDG2-SL-930-SA8-SB-4.0-5.0 |
| | | | Sample Type | N | N | N | N | N | FD |
| | | | Sample Date | 05/22/2014 | 06/10/2014 | 05/20/2014 | 06/16/2014 | 06/11/2014 | 06/10/2014 |
| | | | SDG | PH196 | PH227 | PH188 | PH234 | PH229 | PH227 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.1 U | 1.2 U | 1.0 U | 1.1 U | 1.0 U | 1.2 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-841-SA5B-SB-4.0-5.0 | FDG-SL-842-SA5B-SB-4.0-5.0 | SL-838-SA5B-SB-4.0-5.0 | SL-839-SA5B-SB-4.0-5.0 | SL-840-SA5B-SB-4.0-5.0 | SL-843-SA5B-SB-4.0-5.0 | FDG2-SL-631-SA8-SB-4.5-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/14/2014 | 05/14/2014 | 01/13/2014 | 01/14/2014 | 01/13/2014 | 01/14/2014 | 06/05/2014 |
| | | | SDG | PH177 | PH177 | PH158 | PH159 | PH158 | PH159 | PH220 |
| | | | Start Depth | 4 | 4 | 4 | 4 | 4 | 4 | 4.5 |
| | | | End Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.0 U | 1.0 U | 1.0 U | 1.1 U | 0.9 U | 1.0 U | 1 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-503-SA5C-TR-5.0 | SL-534-SA8-TR-5.0 | SL-548-SA8-TR-5.0 | SL-605-SA5C-TR-5.0 | SL-611-SA8-TR-5.0 | SL-646-SA5C-TR-5.0 | SL-651-SA5C-TR-5.0 | SL-653-SA5C-TR-5.0 | SL-655-SA5C-TR-5.0 | SL-686-SA6-TR-5.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/29/2014 | 05/19/2014 | 05/19/2014 | 05/29/2014 | 05/20/2014 | 06/04/2014 | 05/30/2014 | 06/02/2014 | 06/04/2014 | 05/21/2014 |
| | | | SDG | PH207 | PH185 | PH185 | PH207 | PH189 | PH217 | PH209 | PH212 | PH217 | PH192 |
| | | | Start Depth | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | End Depth | | | | | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.1 U | 1.0 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.0 U | 1.0 U | 1 U | 1.0 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-693-SA5B-TR-5.0 | SL-848-SA8-TR-5.0 | SL-951-SA5C-TR-5.0 | SL-587-SA5A-TR-5.5 | SL-887-SA5A-TR-5.5 | SL-570-SA6-TR-6.0 | SL-730-SA5A-TR-6.0 | FDG2-SL-630-SA8-SB-7.0-8.0 | FDG2-SL-631-SA8-SB-7.0-8.0 |
| | | | Sample Type | N | FD | FD | N | N | N | N | N | N |
| | | | Sample Date | 05/27/2014 | 05/19/2014 | 05/30/2014 | 05/22/2014 | 05/22/2014 | 05/20/2014 | 05/22/2014 | 06/10/2014 | 06/05/2014 |
| | | | SDG | PH201 | PH185 | PH209 | PH195 | PH195 | PH189 | PH195 | PH227 | PH220 |
| | | | Start Depth | 5 | 5 | 5 | 5.5 | 5.5 | 6 | 6 | 7 | 7 |
| | | | End Depth | | | | | | | | 8 | 8 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1 U | 1.0 U | 1.0 U | 1 U | 1.1 U | 1.0 U | 0.9 U | 1.2 U | 1.1 U |

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J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-840-SA5B-SB-7.0-8.0 | SL-843-SA5B-SB-7.0-8.0 | SL-503-SA5C-TR-7.5 | SL-636-SA5A-TR-7.5 | SL-699-SA5B-TR-8.0 | FDG2-SL-581-NBZ-SB-9.0-10.0 | FDG2-SL-623-SA8-SB-9.0-10.0 | FDG2-SL-628-SA8-SB-9.0-10.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 01/13/2014 | 01/14/2014 | 05/29/2014 | 05/23/2014 | 05/28/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 |
| | | | SDG | PH158 | PH159 | PH207 | PH199 | PH204 | PH196 | PH193 | PH196 |
| | | | Start Depth | 7 | 7 | 7.5 | 7.5 | 8 | 9 | 9 | 9 |
| | | | End Depth | 8 | 8 | | | | 10 | 10 | 10 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.2 U | 1.1 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1.0 U | 1.0 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | FDG-SL-841-SA5B-SB-9.0-10.0 | SL-839-SA5B-SB-9.0-10.0 | SL-548-SA8-TR-10.0 | SL-605-SA5C-TR-10.0 | SL-651-SA5C-TR-10.0 | SL-653-SA5C-TR-10.0 | SL-611-SA8-TR-10.5 | SL-529-SA5B-TR-11.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/14/2014 | 01/14/2014 | 05/19/2014 | 05/29/2014 | 05/30/2014 | 06/02/2014 | 05/20/2014 | 05/28/2014 |
| | | | SDG | PH177 | PH159 | PH185 | PH207 | PH209 | PH212 | PH189 | PH204 |
| | | | Start Depth | 9 | 9 | 10 | 10 | 10 | 10 | 10.5 | 11 |
| | | | End Depth | 10 | 10 | | | | | | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.1 U | 1.1 U | 1 U | 1.1 U | 1.1 U | 1 U | 1.0 U | 1 U |

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J – Result is an estimated value
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Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-686-SA6-TR-11.0 | FDG2-SL-874-SA5A-SB-12.0-13.0 | FDG2-SL-581-NBZ-SB-13.0-14.0 | FDG2-SL-623-SA8-SB-14.0-15.0 | FDG2-SL-628-SA8-SB-14.0-15.0 | FDG-SL-836-SA5B-SB-15.0-16.0 | SL-651-SA5C-TR-15.0 |
| | | | Sample Type | N | N | N | N | N | N | N |
| | | | Sample Date | 05/21/2014 | 05/20/2014 | 05/22/2014 | 05/21/2014 | 05/22/2014 | 05/13/2014 | 05/30/2014 |
| | | | SDG | PH192 | PH188 | PH196 | PH193 | PH196 | PH176 | PH209 |
| | | | Start Depth | 11 | 12 | 13 | 14 | 14 | 15 | 15 |
| | | | End Depth | | 13 | 14 | 15 | 15 | 16 | |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1 U | 1 U | 1.1 U | 1.1 U | 1.3 U | 1.1 U | 1.0 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation. Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Sample Name | SL-653-SA5C-TR-15.0 | SL-839-SA5B-SB-15.5-16.5 | FDG2-SL-623-SA8-SB-19.0-20.0 | FDG-SL-836-SA5B-SB-19.0-20.0 |
| | | | Sample Type | N | N | N | N |
| | | | Sample Date | 06/02/2014 | 01/14/2014 | 05/21/2014 | 05/13/2014 |
| | | | SDG | PH212 | PH159 | PH193 | PH176 |
| | | | Start Depth | 15 | 15.5 | 19 | 19 |
| | | | End Depth | | 16.5 | 20 | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | |
| 8015M | GROC5C12 | Gasoline Range Organics (C5-C12) | mg/kg | 1.0 U | 1.2 U | 1.1 U | 2.2 |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

Trench samples collected at a discrete interval.

| | | | | Sample Name | SVL-501-SA5B-SB-0.75-1.25 | SVL-563-SA5C-SB-1.0-1.5 | SVL-577-SA6-SB-1.0-2.0 | SVL-611-SA5A-SB-1.35-1.85 | SVL-536-SA5B-SB-1.5-2.0 | SVL-538-SA5B-SB-1.5-2.0 | SVL-552-SA5A-SB-1.5-2.0 | SVL-554-SA5A-SB-1.5-2.0 | SVL-574-SA5A-SB-1.5-2.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/12/2014 | 06/02/2014 | 06/11/2014 | 06/09/2014 | 06/11/2014 | 05/15/2014 | 06/05/2014 | 06/05/2014 | 06/04/2014 |
| | | | | SDG | PH174 | PH211 | PH228 | PH223 | PH228 | PH178 | PH219 | PH219 | PH216 |
| | | | | Start Depth | 0.75 | 1 | 1 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | | | | End Depth | 1.25 | 1.5 | 2 | 1.9 | 2 | 2 | 2 | 2 | 2 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 100-42-5 | Styrene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 107-02-8 | Acrolein | µg/kg | 89 U | 110 U | 100 U | 97 U | 100 U | 90 U | 110 U | 110 U | 110 U | |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 18 U | 21 U | 20 U | 19 U | 20 U | 18 U | 22 U | 22 U | 22 U | |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 9 U | 11 U | 10 U | 10 U | 10 U | 9 U | 11 U | 11 U | 11 U | |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 9 U | 11 U | 10 U | 10 U | 10 U | 9 U | 11 U | 11 U | 11 U | |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 108-88-3 | Toluene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 9 U | 11 U | 10 U | 10 U | 10 U | 9 U | 11 U | 11 U | 11 U | |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 9 U | 11 U | 10 U | 10 U | 10 U | 9 U | 11 U | 11 U | 11 U | |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 67-64-1 | Acetone | µg/kg | 18 U | 21 U | 20 U | 19 U | 20 U | 18 U | 22 U | 22 U | 22 U | |
| 8260B | 67-66-3 | Chloroform | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 71-43-2 | Benzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-25-2 | Bromoform | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 44 U | 53 U | 51 U | 49 U | 51 U | 45 U | 55 U | 54 U | 56 U | |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 UJ C | 5 U | 5 U | 6 U | |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U | |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 UJ C | 5 U | 5 U | 6 U | |

| | | | | Sample Name | SVL-501-SA5B-SB-0.75-1.25 | SVL-563-SA5C-SB-1.0-1.5 | SVL-577-SA6-SB-1.0-2.0 | SVL-611-SA5A-SB-1.35-1.85 | SVL-536-SA5B-SB-1.5-2.0 | SVL-538-SA5B-SB-1.5-2.0 | SVL-552-SA5A-SB-1.5-2.0 | SVL-554-SA5A-SB-1.5-2.0 | SVL-574-SA5A-SB-1.5-2.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/12/2014 | 06/02/2014 | 06/11/2014 | 06/09/2014 | 06/11/2014 | 05/15/2014 | 06/05/2014 | 06/05/2014 | 06/04/2014 |
| | | | | SDG | PH174 | PH211 | PH228 | PH223 | PH228 | PH178 | PH219 | PH219 | PH216 |
| | | | | Start Depth | 0.75 | 1 | 1 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | | | | End Depth | 1.25 | 1.5 | 2 | 1.9 | 2 | 2 | 2 | 2 | 2 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 9 U | 11 U | 10 U | 10 U | 10 U | 9 U | 11 U | 11 U | 11 U |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 4 U | 5 U | 5 U | 5 U | 5 U | 4 U | 5 U | 5 U | 6 U |

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J – Result is an estimated value
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Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | Sample Name | SVL-630-SA5A-SB-1.5-2.0 | SVL-536-SA5D-SB-1.8-2.3 | FDG2-SL-1175-SA5A-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | SVL-504-SA8-SB-2.0-2.5 | SVL-527-SA6-SB-2.0-3.0 | SVL-543-SA5B-SB-2.0-2.5 | SVL-551-SA5C-SB-2.0-2.8 | SVL-566-SA5B-SB-2.0-2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N | N |
| | | | | Sample Date | 06/09/2014 | 05/23/2014 | 06/16/2014 | 06/16/2014 | 05/16/2014 | 06/09/2014 | 05/14/2014 | 05/28/2014 | 05/15/2014 |
| | | | | SDG | PH223 | PH198 | PH234 | PH234 | PH181 | PH223 | PH182 | PH203 | PH178 |
| | | | | Start Depth | 1.5 | 1.8 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | End Depth | 2 | 2.3 | 3 | 3 | 2.5 | 3 | 2.5 | 2.8 | 2.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 100-42-5 | Styrene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 107-02-8 | Acrolein | µg/kg | 110 U | 110 U | 100 U | 100 U | 100 U | 110 U | 110 U | 100 U | 95 U | |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 21 U | 21 U | 21 U | 21 U | 21 U | 22 U | 23 U | 20 U | 19 U | |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 11 U | 11 U | 10 U | 10 UJ Q | 10 U | 11 U | 11 U | 10 U | 9 U | |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 11 U | 11 U | 10 U | 10 U | 10 U | 11 U | 11 U | 10 U | 9 U | |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 108-88-3 | Toluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 11 U | 11 U | 10 U | 10 U | 10 U | 11 U | 11 U | 10 U | 9 U | |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 11 U | 11 U | 10 U | 10 U | 10 U | 11 U | 11 U | 10 U | 9 U | |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 67-64-1 | Acetone | µg/kg | 21 U | 21 U | 21 U | 21 U | 21 U | 22 U | 23 U | 20 U | 19 U | |
| 8260B | 67-66-3 | Chloroform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 71-43-2 | Benzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 5 U | 5 U | 5 UJ C | 5 UJ C | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 5 U | 5 U | 5 UJ C | 5 UJ C | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-25-2 | Bromoform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 53 U | 53 U | 52 U | 51 U | 52 U | 56 U | 56 U | 51 U | 47 U | |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 5 U | 5 U | 5 UJ C | 5 UJ C | 5 U | 6 U | 6 U | 5 U | 5 UJ C | |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U | |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 UJ C | |

| | | | | Sample Name | SVL-630-SA5A-SB-1.5-2.0 | SVL-536-SA5D-SB-1.8-2.3 | FDG2-SL-1175-SA5A-SB-2.0-3.0 | FDG2-SL-875-SA5A-SB-2.0-3.0 | SVL-504-SA8-SB-2.0-2.5 | SVL-527-SA6-SB-2.0-3.0 | SVL-543-SA5B-SB-2.0-2.5 | SVL-551-SA5C-SB-2.0-2.8 | SVL-566-SA5B-SB-2.0-2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N | N |
| | | | | Sample Date | 06/09/2014 | 05/23/2014 | 06/16/2014 | 06/16/2014 | 05/16/2014 | 06/09/2014 | 05/14/2014 | 05/28/2014 | 05/15/2014 |
| | | | | SDG | PH223 | PH198 | PH234 | PH234 | PH181 | PH223 | PH182 | PH203 | PH178 |
| | | | | Start Depth | 1.5 | 1.8 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | End Depth | 2 | 2.3 | 3 | 3 | 2.5 | 3 | 2.5 | 2.8 | 2.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 11 U | 11 U | 10 U | 10 U | 10 U | 11 U | 11 U | 10 U | 9 U |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | 5 U | 5 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | Sample Name | SVL-531-SA5C-SB-2.5-2.9 | SVL-559-SA5C-SB-2.5-3.0 | SVL-569-SA5B-SB-2.5-3.0 | SVL-571-SA5A-SB-2.5-3.0 | SVL-576-SA5A-SB-2.5-3.0 | SVL-521-SA5B-SB-3.0-3.5 | SVL-534-SA5B-SB-3.0-3.5 | SVL-545-SA5C-SB-3.0-3.5 | SVL-557-SA5C-SB-3.0-3.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 05/29/2014 | 06/11/2014 | 06/04/2014 | 06/04/2014 | 05/14/2014 | 05/15/2014 | 05/28/2014 | 05/29/2014 |
| | | | | SDG | PH186 | PH206 | PH228 | PH216 | PH216 | PH182 | PH178 | PH203 | PH206 |
| | | | | Start Depth | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 3 | 3 | 3 | 3 |
| | | | | End Depth | 2.9 | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 100-42-5 | Styrene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 107-02-8 | Acrolein | µg/kg | 100 U | 110 U | 93 U | 100 U | 100 U | 99 U | 95 U | 120 U | 120 U | |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 20 U | 21 U | 19 U | 20 U | 21 U | 20 U | 19 U | 23 U | 23 U | |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 12 U | 12 U | |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 12 U | 12 U | |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 108-88-3 | Toluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 12 U | 12 U | |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 12 U | 12 U | |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 67-64-1 | Acetone | µg/kg | 20 U | 21 U | 19 U | 20 U | 21 U | 20 U | 19 U | 23 U | 23 U | |
| 8260B | 67-66-3 | Chloroform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 71-43-2 | Benzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-25-2 | Bromoform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 51 U | 53 U | 46 U | 50 U | 52 U | 49 U | 47 U | 58 U | 59 U | |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 UJ C | 6 U | 6 U | |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U | |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 UJ C | 6 U | 6 U | |

| | | | | Sample Name | SVL-531-SA5C-SB-2.5-2.9 | SVL-559-SA5C-SB-2.5-3.0 | SVL-569-SA5B-SB-2.5-3.0 | SVL-571-SA5A-SB-2.5-3.0 | SVL-576-SA5A-SB-2.5-3.0 | SVL-521-SA5B-SB-3.0-3.5 | SVL-534-SA5B-SB-3.0-3.5 | SVL-545-SA5C-SB-3.0-3.5 | SVL-557-SA5C-SB-3.0-3.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 05/29/2014 | 06/11/2014 | 06/04/2014 | 06/04/2014 | 05/14/2014 | 05/15/2014 | 05/28/2014 | 05/29/2014 |
| | | | | SDG | PH186 | PH206 | PH228 | PH216 | PH216 | PH182 | PH178 | PH203 | PH206 |
| | | | | Start Depth | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 3 | 3 | 3 | 3 |
| | | | | End Depth | 2.9 | 3 | 3 | 3 | 3 | 3.5 | 3.5 | 3.5 | 3.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 12 U | 12 U |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 6 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | Sample Name | SVL-566-SA5A-SB-3.0-3.5 | SVL-627-SA5A-SB-3.0-3.5 | SVL-532-SA8-SB-3.5-4.0 | SVL-586-SA5B-SB-3.75-4.25 | SVL-986-SA5B-SB-3.75-4.25 | SVL-574-SA6-SB-3.8-4.3 | SVL-529-SA5A-SB-4.0-4.5 | SVL-532-SA5B-SB-4.0-5.0 | SVL-532-SA5D-SB-4.0-4.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | FD | N | N | N | N |
| | | | | Sample Date | 06/04/2014 | 06/06/2014 | 06/12/2014 | 06/04/2014 | 06/04/2014 | 06/09/2014 | 06/05/2014 | 05/13/2014 | 05/27/2014 |
| | | | | SDG | PH216 | PH222 | PH230 | PH216 | PH216 | PH223 | PH219 | PH180 | PH200 |
| | | | | Start Depth | 3 | 3 | 3.5 | 3.75 | 3.75 | 3.8 | 4 | 4 | 4 |
| | | | | End Depth | 3.5 | 3.5 | 4 | 4.25 | 4.25 | 4.3 | 4.5 | 5 | 4.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 100-42-5 | Styrene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 107-02-8 | Acrolein | µg/kg | 110 U | 110 U | 110 U | 110 U | 110 U | 100 U | 110 U | 93 U | 100 U | |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 22 U | 22 U | 23 U | 22 U | 22 U | 20 U | 21 U | 19 U | 21 U | |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 11 U | 11 U | 11 U | 11 U | 11 U | 10 U | 11 U | 9 U | 10 U | |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 11 U | 11 U | 11 U | 11 U | 11 U | 10 U | 11 U | 9 U | 10 U | |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-88-3 | Toluene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 11 U | 11 U | 11 U | 11 U | 11 U | 10 U | 11 U | 9 U | 10 U | |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 11 U | 11 U | 11 U | 11 U | 11 U | 10 U | 11 U | 9 U | 10 U | |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 67-64-1 | Acetone | µg/kg | 22 U | 16 J Z | 23 U | 22 U | 22 U | 11 J Z | 21 U | 19 U | 21 U | |
| 8260B | 67-66-3 | Chloroform | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 71-43-2 | Benzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-25-2 | Bromoform | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 56 U | 54 U | 56 U | 54 U | 55 U | 50 U | 53 U | 46 U | 52 U | |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

| | | | | Sample Name | SVL-566-SA5A-SB-3.0-3.5 | SVL-627-SA5A-SB-3.0-3.5 | SVL-532-SA8-SB-3.5-4.0 | SVL-586-SA5B-SB-3.75-4.25 | SVL-986-SA5B-SB-3.75-4.25 | SVL-574-SA6-SB-3.8-4.3 | SVL-529-SA5A-SB-4.0-4.5 | SVL-532-SA5B-SB-4.0-5.0 | SVL-532-SA5D-SB-4.0-4.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | FD | N | N | N | N |
| | | | | Sample Date | 06/04/2014 | 06/06/2014 | 06/12/2014 | 06/04/2014 | 06/04/2014 | 06/09/2014 | 06/05/2014 | 05/13/2014 | 05/27/2014 |
| | | | | SDG | PH216 | PH222 | PH230 | PH216 | PH216 | PH223 | PH219 | PH180 | PH200 |
| | | | | Start Depth | 3 | 3 | 3.5 | 3.75 | 3.75 | 3.8 | 4 | 4 | 4 |
| | | | | End Depth | 3.5 | 3.5 | 4 | 4.25 | 4.25 | 4.3 | 4.5 | 5 | 4.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 11 U | 11 U | 11 U | 11 U | 11 U | 10 U | 11 U | 9 U | 10 U | |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |
| 8260B | 99-87-6 | Cymene | µg/kg | 6 U | 5 U | 6 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | Sample Name | SVL-551-SA6-SB-4.0-5.0 | SVL-576-SA5B-SB-4.0-4.3 | SVL-832-SA5B-SB-4.0-5.0 | SVL-546-SA8-SB-4.4-4.9 | SVL-846-SA8-SB-4.4-4.9 | SVL-511-SA5D-SB-4.5-5.5 | SVL-524-SA8-SB-4.5-5.5 | SVL-553-SA5D-SB-4.5-5.5 | SVL-556-SA5D-SB-4.5-5.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N | N |
| | | | | Sample Date | 06/10/2014 | 06/02/2014 | 05/13/2014 | 06/12/2014 | 06/12/2014 | 05/22/2014 | 05/19/2014 | 06/03/2014 | 06/03/2014 |
| | | | | SDG | PH226 | PH211 | PH180 | PH230 | PH230 | PH194 | PH183 | PH214 | PH214 |
| | | | | Start Depth | 4 | 4 | 4 | 4.4 | 4.4 | 4.5 | 4.5 | 4.5 | 4.5 |
| | | | | End Depth | 5 | 4.3 | 5 | 4.9 | 4.9 | 5.5 | 5.5 | 5.5 | 5.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 100-42-5 | Styrene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 107-02-8 | Acrolein | µg/kg | 100 U | 110 U | 93 U | 100 U | 100 U | 100 U | 94 U | 110 U | 100 U | |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 20 U | 21 U | 19 U | 21 U | 20 U | 20 U | 19 U | 23 U | 21 U | |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 10 U | 11 U | 9 U | 10 UJ Q | 10 U | 10 U | 9 U | 11 U | 10 U | |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 11 U | 10 U | |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 108-88-3 | Toluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 11 U | 10 U | |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 11 U | 10 U | |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 67-64-1 | Acetone | µg/kg | 20 U | 21 U | 19 U | 21 U | 20 U | 20 U | 19 U | 23 U | 21 U | |
| 8260B | 67-66-3 | Chloroform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 71-43-2 | Benzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-25-2 | Bromoform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 50 U | 53 U | 47 U | 51 U | 50 U | 50 U | 47 U | 56 U | 52 U | |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | |

| | | | | Sample Name | SVL-551-SA6-SB-4.0-5.0 | SVL-576-SA5B-SB-4.0-4.3 | SVL-832-SA5B-SB-4.0-5.0 | SVL-546-SA8-SB-4.4-4.9 | SVL-846-SA8-SB-4.4-4.9 | SVL-511-SA5D-SB-4.5-5.5 | SVL-524-SA8-SB-4.5-5.5 | SVL-553-SA5D-SB-4.5-5.5 | SVL-556-SA5D-SB-4.5-5.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N | N |
| | | | | Sample Date | 06/10/2014 | 06/02/2014 | 05/13/2014 | 06/12/2014 | 06/12/2014 | 05/22/2014 | 05/19/2014 | 06/03/2014 | 06/03/2014 |
| | | | | SDG | PH226 | PH211 | PH180 | PH230 | PH230 | PH194 | PH183 | PH214 | PH214 |
| | | | | Start Depth | 4 | 4 | 4 | 4.4 | 4.4 | 4.5 | 4.5 | 4.5 | 4.5 |
| | | | | End Depth | 5 | 4.3 | 5 | 4.9 | 4.9 | 5.5 | 5.5 | 5.5 | 5.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 10 U | 11 U | 9 U | 10 U | 10 U | 10 U | 9 U | 11 U | 10 U |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | Sample Name | SVL-563-SA5B-SB-4.5-5.0 | SVL-602-SA5B-SB-4.5-5.0 | SVL-811-SA5D-SB-4.5-5.5 | SVL-507-SA5C-SB-5.0-6.0 | SVL-512-SA5D-SB-5.0-6.0 | SVL-515-SA5D-SB-5.0-6.0 | SVL-517-SA8-SB-5.0-6.0 | SVL-525-SA5C-SB-5.0-6.0 | SVL-528-SA8-SB-5.0-6.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N | N |
| | | | | Sample Date | 06/11/2014 | 06/03/2014 | 05/22/2014 | 05/28/2014 | 05/21/2014 | 05/21/2014 | 05/19/2014 | 05/20/2014 | 05/19/2014 |
| | | | | SDG | PH228 | PH214 | PH194 | PH203 | PH190 | PH190 | PH183 | PH186 | PH183 |
| | | | | Start Depth | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | | End Depth | 5 | 5 | 5.5 | 6 | 6 | 6 | 6 | 6 | 6 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 100-42-5 | Styrene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 107-02-8 | Acrolein | µg/kg | 97 U | 110 U | 110 U | 96 U | 110 U | 110 U | 110 U | 94 U | 120 U |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 19 U | 22 U | 21 U | 19 U | 21 U | 23 U | 21 U | 19 U | 24 U |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 10 U | 11 U | 11 U | 10 U | 11 U | 11 U | 11 U | 9 U | 12 U |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 10 U | 11 U | 11 U | 10 U | 11 U | 11 U | 11 U | 9 U | 12 U |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 108-88-3 | Toluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 10 U | 11 U | 11 U | 10 U | 11 U | 11 U | 11 U | 9 U | 12 U |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 10 U | 11 U | 11 U | 10 U | 11 U | 11 U | 11 U | 9 U | 12 U |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 67-64-1 | Acetone | µg/kg | 19 U | 22 U | 21 U | 19 U | 21 U | 23 U | 21 U | 32 | 24 U |
| 8260B | 67-66-3 | Chloroform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 71-43-2 | Benzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-25-2 | Bromoform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 49 U | 55 U | 53 U | 48 U | 53 U | 57 U | 53 U | 47 U | 61 U |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |

| | | | | Sample Name | SVL-563-SA5B-SB-4.5-5.0 | SVL-602-SA5B-SB-4.5-5.0 | SVL-811-SA5D-SB-4.5-5.5 | SVL-507-SA5C-SB-5.0-6.0 | SVL-512-SA5D-SB-5.0-6.0 | SVL-515-SA5D-SB-5.0-6.0 | SVL-517-SA8-SB-5.0-6.0 | SVL-525-SA5C-SB-5.0-6.0 | SVL-528-SA8-SB-5.0-6.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | FD | N | N | N | N | N | N |
| | | | | Sample Date | 06/11/2014 | 06/03/2014 | 05/22/2014 | 05/28/2014 | 05/21/2014 | 05/21/2014 | 05/19/2014 | 05/20/2014 | 05/19/2014 |
| | | | | SDG | PH228 | PH214 | PH194 | PH203 | PH190 | PH190 | PH183 | PH186 | PH183 |
| | | | | Start Depth | 4.5 | 4.5 | 4.5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | | End Depth | 5 | 5 | 5.5 | 6 | 6 | 6 | 6 | 6 | 6 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 10 U | 11 U | 11 U | 10 U | 11 U | 11 U | 11 U | 4 J Z | 12 U |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 6 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Name | SVL-546-SA5D-SB-5.0-6.0 | SVL-550-SA5D-SB-5.0-6.0 | SVL-577-SA5B-SB-5.3-5.8 | SVL-518-SA5C-SB-5.5-6.0 | SVL-549-SA5C-SB-6.3-6.8 | SVL-519-SA8-SB-7.5-8.0 | SVL-562-SA5B-SB-8.0-9.0 | SVL-553-SA5D-SB-9.0-10.0 | SVL-517-SA8-SB-10.0-11.0 |
| | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | Sample Date | 05/27/2014 | 05/27/2014 | 06/04/2014 | 06/02/2014 | 06/10/2014 | 05/16/2014 | 06/10/2014 | 06/03/2014 | 05/19/2014 |
| | | | SDG | PH200 | PH200 | PH216 | PH211 | PH226 | PH181 | PH226 | PH214 | PH183 |
| | | | Start Depth | 5 | 5 | 5.3 | 5.5 | 6.3 | 7.5 | 8 | 9 | 10 |
| | | | End Depth | 6 | 6 | 5.8 | 6 | 6.8 | 8 | 9 | 10 | 11 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 100-42-5 | Styrene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 107-02-8 | Acrolein | µg/kg | 100 U | 100 U | 94 U | 110 U | 91 U | 110 U | 100 U | 98 U | 110 U |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 21 U | 20 U | 19 U | 22 U | 18 U | 22 U | 21 U | 20 U | 21 U |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 10 U | 10 U | 9 U | 11 U | 9 U | 11 U | 10 U | 10 U | 11 U |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 10 U | 10 U | 9 U | 11 U | 9 U | 11 U | 10 U | 10 U | 11 U |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-88-3 | Toluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 10 U | 10 U | 9 U | 11 U | 9 U | 11 U | 10 U | 10 U | 11 U |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 10 U | 10 U | 9 U | 11 U | 9 U | 11 U | 10 U | 10 U | 11 U |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 67-64-1 | Acetone | µg/kg | 21 U | 20 U | 19 U | 22 U | 18 U | 22 U | 21 U | 20 U | 21 U |
| 8260B | 67-66-3 | Chloroform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 71-43-2 | Benzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-25-2 | Bromoform | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 51 U | 51 U | 47 U | 55 U | 45 U | 54 U | 52 U | 49 U | 54 U |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

| | | | | Sample Name | SVL-546-SA5D-SB-5.0-6.0 | SVL-550-SA5D-SB-5.0-6.0 | SVL-577-SA5B-SB-5.3-5.8 | SVL-518-SA5C-SB-5.5-6.0 | SVL-549-SA5C-SB-6.3-6.8 | SVL-519-SA8-SB-7.5-8.0 | SVL-562-SA5B-SB-8.0-9.0 | SVL-553-SA5D-SB-9.0-10.0 | SVL-517-SA8-SB-10.0-11.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/27/2014 | 05/27/2014 | 06/04/2014 | 06/02/2014 | 06/10/2014 | 05/16/2014 | 06/10/2014 | 06/03/2014 | 05/19/2014 |
| | | | | SDG | PH200 | PH200 | PH216 | PH211 | PH226 | PH181 | PH226 | PH214 | PH183 |
| | | | | Start Depth | 5 | 5 | 5.3 | 5.5 | 6.3 | 7.5 | 8 | 9 | 10 |
| | | | | End Depth | 6 | 6 | 5.8 | 6 | 6.8 | 8 | 9 | 10 | 11 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 10 U | 10 U | 9 U | 11 U | 9 U | 11 U | 10 U | 10 U | 11 U | |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | Sample Name | SVL-525-SA5C-SB-10.0-11.0 | SVL-556-SA5D-SB-10.0-11.0 | SVL-561-SA5C-SB-10.5-11.0 | SVL-518-SA5C-SB-11.0-11.5 | SVL-528-SA8-SB-11.0-12.0 | SVL-553-SA5D-SB-14.0-15.0 | SVL-525-SA5C-SB-15.0-16.0 | SVL-517-SA8-SB-15.5-16.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 06/03/2014 | 06/10/2014 | 06/02/2014 | 05/19/2014 | 06/03/2014 | 05/20/2014 | 05/19/2014 |
| | | | | SDG | PH186 | PH214 | PH226 | PH211 | PH183 | PH214 | PH186 | PH183 |
| | | | | Start Depth | 10 | 10 | 10.5 | 11 | 11 | 14 | 15 | 15.5 |
| | | | | End Depth | 11 | 11 | 11 | 11.5 | 12 | 15 | 16 | 16.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 100-42-5 | Styrene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 107-02-8 | Acrolein | µg/kg | 100 U | 100 U | 90 U | 100 U | 120 U | 110 U | 100 U | 110 U | |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 20 U | 21 U | 18 U | 21 U | 25 U | 21 U | 20 U | 21 U | |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 10 U | 10 U | 9 U | 10 U | 12 U | 11 U | 10 U | 11 U | |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 10 U | 10 U | 9 U | 10 U | 12 U | 11 U | 10 U | 11 U | |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 108-88-3 | Toluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 10 U | 10 U | 9 U | 10 U | 12 U | 11 U | 10 U | 11 U | |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 10 U | 10 U | 9 U | 10 U | 12 U | 11 U | 10 U | 11 U | |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 67-64-1 | Acetone | µg/kg | 20 U | 21 U | 18 U | 21 U | 25 U | 21 U | 20 U | 21 U | |
| 8260B | 67-66-3 | Chloroform | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 71-43-2 | Benzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-25-2 | Bromoform | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 51 U | 51 U | 45 U | 51 U | 62 U | 53 U | 51 U | 53 U | |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U | |

| | | | | Sample Name | SVL-525-SA5C-SB-10.0-11.0 | SVL-556-SA5D-SB-10.0-11.0 | SVL-561-SA5C-SB-10.5-11.0 | SVL-518-SA5C-SB-11.0-11.5 | SVL-528-SA8-SB-11.0-12.0 | SVL-553-SA5D-SB-14.0-15.0 | SVL-525-SA5C-SB-15.0-16.0 | SVL-517-SA8-SB-15.5-16.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Type | N | N | N | N | N | N | N | N |
| | | | | Sample Date | 05/20/2014 | 06/03/2014 | 06/10/2014 | 06/02/2014 | 05/19/2014 | 06/03/2014 | 05/20/2014 | 05/19/2014 |
| | | | | SDG | PH186 | PH214 | PH226 | PH211 | PH183 | PH214 | PH186 | PH183 |
| | | | | Start Depth | 10 | 10 | 10.5 | 11 | 11 | 14 | 15 | 15.5 |
| | | | | End Depth | 11 | 11 | 11 | 11.5 | 12 | 15 | 16 | 16.5 |
| Analytic Method | CAS Number | Chemical Name | Unit | | | | | | | | | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 10 U | 10 U | 9 U | 10 U | 12 U | 11 U | 10 U | 11 U |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 5 U | 5 U | 5 U | 5 U | 6 U | 5 U | 5 U | 5 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

| | | | | |
|---|---|---|---|---|
| | | | Sample Name | SVL-553-SA5D-SB-19.0-20.0 |
| | | | Sample Type | N |
| | | | Sample Date | 06/03/2014 |
| | | | SDG | PH214 |
| | | | Start Depth | 19 |
| | | | End Depth | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | |
| 8260B | 100-41-4 | Ethylbenzene | µg/kg | 5 U |
| 8260B | 100-42-5 | Styrene | µg/kg | 5 U |
| 8260B | 10061-01-5 | cis-1,3-Dichloropropene | µg/kg | 5 U |
| 8260B | 10061-02-6 | trans-1,3-Dichloropropene | µg/kg | 5 U |
| 8260B | 103-65-1 | n-Propylbenzene | µg/kg | 5 U |
| 8260B | 104-51-8 | n-Butylbenzene | µg/kg | 5 U |
| 8260B | 106-43-4 | 4-Chlorotoluene | µg/kg | 5 U |
| 8260B | 106-46-7 | 1,4-Dichlorobenzene | µg/kg | 5 U |
| 8260B | 106-93-4 | 1,2-Dibromoethane | µg/kg | 5 U |
| 8260B | 107-02-8 | Acrolein | µg/kg | 100 U |
| 8260B | 107-06-2 | 1,2-Dichloroethane | µg/kg | 5 U |
| 8260B | 107-13-1 | Acrylonitrile | µg/kg | 21 U |
| 8260B | 108-05-4 | Vinyl Acetate | µg/kg | 10 U |
| 8260B | 108-10-1 | 4-Methyl-2-pentanone (MIBK) | µg/kg | 10 U |
| 8260B | 108-20-3 | Di isopropyl Ether | µg/kg | 5 U |
| 8260B | 108-67-8 | 1,3,5-Trimethylbenzene | µg/kg | 5 U |
| 8260B | 108-86-1 | Bromobenzene | µg/kg | 5 U |
| 8260B | 108-88-3 | Toluene | µg/kg | 5 U |
| 8260B | 108-90-7 | Chlorobenzene | µg/kg | 5 U |
| 8260B | 110-75-8 | 2-Chloroethyl Vinyl Ether | µg/kg | 10 U |
| 8260B | 120-82-1 | 1,2,4-Trichlorobenzene | µg/kg | 5 U |
| 8260B | 124-48-1 | Dibromochloromethane | µg/kg | 5 U |
| 8260B | 127-18-4 | Tetrachloroethene | µg/kg | 5 U |
| 8260B | 135-98-8 | 2-Phenylbutane | µg/kg | 5 U |
| 8260B | 142-28-9 | 1,3-Dichloropropane | µg/kg | 5 U |
| 8260B | 156-59-2 | cis-1,2-Dichloroethene | µg/kg | 5 U |
| 8260B | 156-60-5 | trans-1,2-Dichloroethene | µg/kg | 5 U |
| 8260B | 1634-04-4 | Methyl Tert-Butyl Ether | µg/kg | 5 U |
| 8260B | 179601-23-1 | m,p-Xylene | µg/kg | 5 U |
| 8260B | 541-73-1 | 1,3-Dichlorobenzene | µg/kg | 5 U |
| 8260B | 544-10-5 | 1-Chlorohexane | µg/kg | 5 U |
| 8260B | 56-23-5 | Carbon Tetrachloride | µg/kg | 5 U |
| 8260B | 563-58-6 | 1,1-Dichloropropene | µg/kg | 5 U |
| 8260B | 591-78-6 | 2-Hexanone | µg/kg | 10 U |
| 8260B | 594-20-7 | 2,2-Dichloropropane | µg/kg | 5 U |
| 8260B | 630-20-6 | 1,1,1,2-Tetrachloroethane | µg/kg | 5 U |
| 8260B | 637-92-3 | tert-Butyl ethyl ether | µg/kg | 5 U |
| 8260B | 67-64-1 | Acetone | µg/kg | 21 U |
| 8260B | 67-66-3 | Chloroform | µg/kg | 5 U |
| 8260B | 71-43-2 | Benzene | µg/kg | 5 U |
| 8260B | 71-55-6 | 1,1,1-Trichloroethane | µg/kg | 5 U |
| 8260B | 74-83-9 | Bromomethane | µg/kg | 5 U |
| 8260B | 74-87-3 | Chloromethane | µg/kg | 5 U |
| 8260B | 74-88-4 | Methyl Iodide | µg/kg | 5 U |
| 8260B | 74-95-3 | Dibromomethane | µg/kg | 5 U |
| 8260B | 74-97-5 | Bromochloromethane | µg/kg | 5 U |
| 8260B | 75-00-3 | Chloroethane | µg/kg | 5 U |
| 8260B | 75-01-4 | Vinyl Chloride | µg/kg | 5 U |
| 8260B | 75-09-2 | Methylene Chloride | µg/kg | 5 U |
| 8260B | 75-15-0 | Carbon Disulfide | µg/kg | 5 U |
| 8260B | 75-25-2 | Bromoform | µg/kg | 5 U |
| 8260B | 75-27-4 | Bromodichloromethane | µg/kg | 5 U |
| 8260B | 75-34-3 | 1,1-Dichloroethane | µg/kg | 5 U |
| 8260B | 75-35-4 | 1,1-Dichloroethene | µg/kg | 5 U |
| 8260B | 75-65-0 | Tertiary butyl alcohol | µg/kg | 52 U |
| 8260B | 75-69-4 | Trichlorofluoromethane | µg/kg | 5 U |
| 8260B | 75-71-8 | Dichlorodifluoromethane | µg/kg | 5 U |
| 8260B | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane | µg/kg | 5 U |
| 8260B | 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 5 U |

| | | | | |
|---|---|---|---|---|
| | | | Sample Name | SVL-553-SA5D-SB-19.0-20.0 |
| | | | Sample Type | N |
| | | | Sample Date | 06/03/2014 |
| | | | SDG | PH214 |
| | | | Start Depth | 19 |
| | | | End Depth | 20 |
| Analytic Method | CAS Number | Chemical Name | Unit | |
| 8260B | 78-87-5 | 1,2-Dichloropropane | µg/kg | 5 U |
| 8260B | 78-93-3 | 2-Butanone (MEK) | µg/kg | 10 U |
| 8260B | 79-00-5 | 1,1,2-Trichloroethane | µg/kg | 5 U |
| 8260B | 79-01-6 | Trichloroethene | µg/kg | 5 U |
| 8260B | 79-34-5 | 1,1,2,2-Tetrachloroethane | µg/kg | 5 U |
| 8260B | 79-38-9 | Chlorotrifluoroethylene | µg/kg | 5 U |
| 8260B | 87-61-6 | 1,2,3-Trichlorobenzene | µg/kg | 5 U |
| 8260B | 87-68-3 | Hexachloro-1,3-butadiene | µg/kg | 5 U |
| 8260B | 95-47-6 | o-Xylene | µg/kg | 5 U |
| 8260B | 95-49-8 | 2-Chlorotoluene | µg/kg | 5 U |
| 8260B | 95-50-1 | 1,2-Dichlorobenzene | µg/kg | 5 U |
| 8260B | 95-63-6 | 1,2,4-Trimethylbenzene | µg/kg | 5 U |
| 8260B | 96-12-8 | 1,2-Dibromo-3-chloropropane | µg/kg | 5 U |
| 8260B | 96-18-4 | 1,2,3-Trichloropropane | µg/kg | 5 U |
| 8260B | 98-06-6 | tert-Butylbenzene | µg/kg | 5 U |
| 8260B | 98-82-8 | Isopropylbenzene | µg/kg | 5 U |
| 8260B | 994-05-8 | Tertiary amyl methyl ether | µg/kg | 5 U |
| 8260B | 99-87-6 | Cymene | µg/kg | 5 U |

U – Compound not detected above reporting limit
J – Result is an estimated value
R – Result is rejected
Z, etc. – Specific description qualifiers that are applied during validation.
Definitions are provided at the beginning of Appendix A. The letters can vary and there can be more than one letter.

# Appendix B
# Laboratory Reports
**(On CD)**

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 24, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 01/14/2014
Group Number: 1445714
SDG: PH158
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-840-SA5B-SB-0.0-0.5 Soil | 7335015 |
| SL-840-SA5B-SB-4.0-5.0 Soil | 7335016 |
| SL-840-SA5B-SB-7.0-8.0 Soil | 7335017 |
| SL-838-SA5B-SB-0.0-0.5 Soil | 7335018 |
| SL-838-SA5B-SB-4.0-5.0 Soil | 7335019 |
| SL-838-SA5B-SB-4.0-5.0MS Soil | 7335020 |
| SL-838-SA5B-SB-4.0-5.0MSD Soil | 7335021 |
| SL-838-SA5B-SB-4.0-5.0DUP Soil | 7335022 |
| SL-1138-SA5B-SB-4.0-5.0 Soil | 7335023 |
| TB-011314 Water | 7335024 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-840-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335015**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:00 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH158-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.75 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.83 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.3 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.95 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.0 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.4 | J | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.1 | | 1.7 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 12 | J | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 8.4 | J | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.1 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 15 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335015**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:00 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH158-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,600 | | 42.3 | 7.62 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.23 | U | 4.23 | 0.782 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.47 | | 4.23 | 0.740 | 1 |
| 06946 | Barium | 7440-39-3 | 99.7 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.588 | J | 1.06 | 0.0708 | 1 |
| 07914 | Boron | 7440-42-8 | 1.51 | J | 10.6 | 0.888 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0803 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,170 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.2 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.42 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 10.3 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 18,200 | | 42.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 8.44 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 17.8 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,430 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 304 | | 1.06 | 0.0877 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.592 | J | 2.11 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.2 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 259 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,620 | | 106 | 8.81 | 1 |
| 01667 | Sodium | 7440-23-5 | 141 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.68 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,020 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.9 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 60.1 | | 4.23 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.07 | J | 5.28 | 0.888 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.161 | J | 0.423 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0423 | J | 0.211 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.4 | | 0.423 | 0.0719 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.274 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0227 | | 0.0175 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.99 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-840-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335015**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:00 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH158-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0530 JBQ | 1.03 | 0.0518 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0435 JQ | 5.17 | 0.0331 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0638 JBQ | 5.17 | 0.0319 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.321 JBQ | 5.17 | 0.0334 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.391 JB | 5.17 | 0.0324 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.84 JB | 5.17 | 0.0374 | 1 |
| 11031 | OCDD | 3268-87-9 | 36.4 B | 10.3 | 0.0265 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 U | 1.03 | 0.0470 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 5.17 U | 5.17 | 0.0221 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0637 JBQ | 5.17 | 0.0209 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0733 JB | 5.17 | 0.0238 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0938 JB | 5.17 | 0.0230 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.293 JB | 5.17 | 0.0247 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0809 JBQ | 5.17 | 0.0237 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.537 JB | 5.17 | 0.0156 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0569 JBQ | 5.17 | 0.0197 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.40 JB | 10.3 | 0.0330 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.130 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 68 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 66 | 24 - 185 |
| 13C12-23478-PeCDF | 66 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 82 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 73 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335015**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:00 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH158-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335015**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:00 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH158-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 12:11 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 21:28 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 07:27 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 15:15 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:24 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:31 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:31 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:07 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:31 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335015**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:00 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84000 SDG#: PH158-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:16 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-840-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335016**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84040 SDG#: PH158-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.58 | J | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.93 | J | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.99 | J | 1.8 | 0.73 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 0.9 | U | 0.9 | 0.2 | 21.19 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335016**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84040 SDG#: PH158-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,800 | | 43.8 | 7.90 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.38 | U | 4.38 | 0.810 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.25 | | 4.38 | 0.767 | 1 |
| 06946 | Barium | 7440-39-3 | 117 | | 1.10 | 0.0361 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.671 | J | 1.10 | 0.0734 | 1 |
| 07914 | Boron | 7440-42-8 | 0.927 | J | 11.0 | 0.920 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0832 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,900 | | 21.9 | 3.66 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.2 | | 3.29 | 0.175 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.77 | | 1.10 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 9.74 | | 2.19 | 0.318 | 1 |
| 01654 | Iron | 7439-89-6 | 21,100 | | 43.8 | 3.96 | 1 |
| 06955 | Lead | 7439-92-1 | 7.82 | | 3.29 | 0.548 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.5 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,000 | | 11.0 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 206 | | 1.10 | 0.0909 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.571 | J | 2.19 | 0.186 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.3 | | 2.19 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 142 | | 11.0 | 3.17 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,760 | | 110 | 9.13 | 1 |
| 01667 | Sodium | 7440-23-5 | 78.5 | J | 110 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.69 | J | 11.0 | 0.241 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 1.10 | 0.186 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.8 | | 1.10 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 46.3 | | 4.38 | 0.219 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.87 | J | 5.48 | 0.920 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.123 | J | 0.438 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0545 | J | 0.219 | 0.0285 | 2 |
| 06144 | Strontium | 7440-24-6 | 25.5 | | 0.438 | 0.0745 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.270 | | 0.219 | 0.0329 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0182 | U | 0.0182 | 0.0109 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 5.21 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 17.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.6 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335016**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84040 SDG#: PH158-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-840-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335016**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84040 SDG#: PH158-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0790 JBQ | 1.08 | 0.0722 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.41 U | 5.41 | 0.0451 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.41 U | 5.41 | 0.0258 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0623 JB | 5.41 | 0.0275 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.113 JBQ | 5.41 | 0.0249 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.578 JBQ | 5.41 | 0.0433 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.65 JB | 10.8 | 0.0258 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.08 U | 1.08 | 0.0575 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0694 JBQ | 5.41 | 0.0246 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0375 JBQ | 5.41 | 0.0237 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0589 JBQ | 5.41 | 0.0213 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0528 JBQ | 5.41 | 0.0200 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.134 JBQ | 5.41 | 0.0224 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0212 JBQ | 5.41 | 0.0210 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.115 JB | 5.41 | 0.0154 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0519 JBQ | 5.41 | 0.0209 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.301 JB | 10.8 | 0.0441 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00886 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 51 | 25 - 164 |
| 13C12-12378-PeCDD | 61 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 48 | 24 - 169 |
| 13C12-12378-PeCDF | 55 | 24 - 185 |
| 13C12-23478-PeCDF | 57 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 79 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 67 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335016**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84040 SDG#: PH158-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335016**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84040 SDG#: PH158-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 10:05 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016A16A | 01/17/2014 17:51 | Laura M Krieger | 21.19 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401433612 | 01/14/2014 18:26 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401433612 | 01/14/2014 18:27 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 21:47 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 04:57 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 16:12 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:28 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335016**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84040 SDG#: PH158-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:34 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:34 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:09 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:34 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:19 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335017**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:45 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84070 SDG#: PH158-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | | 1.9 | 0.76 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 3.4 | | 1.9 | 0.76 | 1 |
| 12969 | Naphthalene | 91-20-3 | 6.4 | | 1.9 | 0.76 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 26.32 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 37 | U | 37 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.8 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 5.0 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.4 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.7 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-840-SA5B-SB-7.0-8.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335017**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:45 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84070 SDG#: PH158-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | U | 12 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,300 | | 45.2 | 8.14 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.52 | U | 4.52 | 0.836 | 1 |
| 06935 | Arsenic | 7440-38-2 | 8.60 | | 4.52 | 0.791 | 1 |
| 06946 | Barium | 7440-39-3 | 98.3 | | 1.13 | 0.0373 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.697 | J | 1.13 | 0.0757 | 1 |
| 07914 | Boron | 7440-42-8 | 11.3 | U | 11.3 | 0.949 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.13 | U | 1.13 | 0.0858 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,570 | | 22.6 | 3.77 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.6 | | 3.39 | 0.181 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.11 | | 1.13 | 0.112 | 1 |
| 06953 | Copper | 7440-50-8 | 16.4 | | 2.26 | 0.328 | 1 |
| 01654 | Iron | 7439-89-6 | 27,600 | | 45.2 | 4.09 | 1 |
| 06955 | Lead | 7439-92-1 | 9.81 | | 3.39 | 0.565 | 1 |
| 01656 | Lithium | 7439-93-2 | 31.0 | | 4.5 | 0.38 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,880 | | 11.3 | 1.89 | 1 |
| 06958 | Manganese | 7439-96-5 | 257 | | 1.13 | 0.0937 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.322 | J | 2.26 | 0.192 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.2 | | 2.26 | 0.147 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 499 | | 11.3 | 3.26 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,820 | | 113 | 9.42 | 1 |
| 01667 | Sodium | 7440-23-5 | 72.8 | J | 113 | 18.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.16 | J | 11.3 | 0.248 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,300 | | 1.13 | 0.192 | 1 |
| 06971 | Vanadium | 7440-62-2 | 49.3 | | 1.13 | 0.147 | 1 |
| 06972 | Zinc | 7440-66-6 | 65.0 | | 4.52 | 0.226 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.04 | J | 5.65 | 0.949 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.157 | J | 0.452 | 0.113 | 2 |
| 06142 | Silver | 7440-22-4 | 0.226 | U | 0.226 | 0.0294 | 2 |
| 06144 | Strontium | 7440-24-6 | 28.8 | | 0.452 | 0.0768 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.294 | | 0.226 | 0.0339 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0190 | U | 0.0190 | 0.0114 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.57 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 13.2 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335017**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:45 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84070 SDG#: PH158-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-840-SA5B-SB-7.0-8.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335017**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:45 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84070 SDG#: PH158-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.13 | U | 1.13 | 0.0782 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.66 | U | 5.66 | 0.0389 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.66 | U | 5.66 | 0.0270 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0671 | JBQ | 5.66 | 0.0287 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0327 | JB | 5.66 | 0.0268 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.285 | JB | 5.66 | 0.0333 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.77 | JB | 11.3 | 0.0287 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.13 | U | 1.13 | 0.0550 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0439 | JBQ | 5.66 | 0.0262 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0265 | JB | 5.66 | 0.0231 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0392 | JBQ | 5.66 | 0.0210 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0507 | JBQ | 5.66 | 0.0204 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0556 | JB | 5.66 | 0.0208 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0443 | JBQ | 5.66 | 0.0195 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0857 | JBQ | 5.66 | 0.0124 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0633 | JBQ | 5.66 | 0.0158 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.177 | JBQ | 11.3 | 0.0429 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0202 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 52 | 25 - 164 |
| 13C12-12378-PeCDD | 62 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 75 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 49 | 24 - 169 |
| 13C12-12378-PeCDF | 56 | 24 - 185 |
| 13C12-23478-PeCDF | 58 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 71 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 74 | 29 - 147 |
| 13C12-1234678-HpCDF | 78 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335017**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:45 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84070 SDG#: PH158-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335017**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:45 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84070 SDG#: PH158-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 10:37 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016A16A | 01/17/2014 18:28 | Laura M Krieger | 26.32 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401433612 | 01/14/2014 18:28 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401433612 | 01/14/2014 18:28 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 22:05 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 05:18 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 17:08 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:40 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-840-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335017**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 10:45 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84070 SDG#: PH158-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:41 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:41 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:14 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:41 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:21 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-838-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335018**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:30 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83800 SDG#: PH158-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335018**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:30 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83800 SDG#: PH158-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,000 | | 41.5 | 7.49 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.15 | U | 4.15 | 0.769 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.97 | | 4.15 | 0.727 | 1 |
| 06946 | Barium | 7440-39-3 | 89.8 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.534 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 10.4 | U | 10.4 | 0.872 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.04 | U | 1.04 | 0.0789 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,010 | | 20.8 | 3.47 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.0 | | 3.12 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.90 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 10.7 | | 2.08 | 0.301 | 1 |
| 01654 | Iron | 7439-89-6 | 21,300 | | 41.5 | 3.76 | 1 |
| 06955 | Lead | 7439-92-1 | 7.98 | | 3.12 | 0.519 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.3 | | 4.2 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,910 | | 10.4 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 324 | | 1.04 | 0.0862 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.255 | J | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.2 | | 2.08 | 0.135 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 442 | | 10.4 | 3.00 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,830 | | 104 | 8.66 | 1 |
| 01667 | Sodium | 7440-23-5 | 108 | | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.87 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,170 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.9 | | 1.04 | 0.135 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.8 | | 4.15 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 0.890 | J | 5.19 | 0.872 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.145 | J | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.208 | U | 0.208 | 0.0270 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.7 | | 0.415 | 0.0706 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.238 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0172 | U | 0.0172 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.12 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-838-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335018**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:30 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83800 SDG#: PH158-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0955 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.189 | J | 5.06 | 0.0489 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0413 | JBQ | 5.06 | 0.0355 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.230 | JBQ | 5.06 | 0.0370 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.253 | JB | 5.06 | 0.0333 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.430 | JB | 5.06 | 0.0376 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.59 | JB | 10.1 | 0.0282 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.131 | JQ | 1.01 | 0.0762 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.157 | JB | 5.06 | 0.0284 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0885 | JBQ | 5.06 | 0.0264 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0916 | JB | 5.06 | 0.0271 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.118 | JB | 5.06 | 0.0263 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.138 | JBQ | 5.06 | 0.0295 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0979 | JB | 5.06 | 0.0267 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.142 | JB | 5.06 | 0.0134 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0764 | JB | 5.06 | 0.0181 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.382 | JBQ | 10.1 | 0.0417 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.257 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 39 | 25 - 164 |
| 13C12-12378-PeCDD | 47 | 25 - 181 |
| 13C12-123478-HxCDD | 63 | 32 - 141 |
| 13C12-123678-HxCDD | 62 | 28 - 130 |
| 13C12-123789-HxCDD | 63 | 28 - 130 |
| 13C12-1234678-HpCDD | 66 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 35 | 24 - 169 |
| 13C12-12378-PeCDF | 43 | 24 - 185 |
| 13C12-23478-PeCDF | 44 | 21 - 178 |
| 13C12-123478-HxCDF | 55 | 26 - 152 |
| 13C12-123678-HxCDF | 58 | 26 - 123 |
| 13C12-234678-HxCDF | 58 | 28 - 136 |
| 13C12-123789-HxCDF | 59 | 29 - 147 |
| 13C12-1234678-HpCDF | 69 | 28 - 143 |
| 13C12-1234789-HpCDF | 58 | 26 - 138 |
| 13C12-OCDF | 58 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335018**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:30 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83800 SDG#: PH158-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335018**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:30 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83800 SDG#: PH158-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 11:08 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 22:24 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 05:40 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 18:05 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:44 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:43 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:43 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:16 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:43 | John P Hook | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335018**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:30 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83800 SDG#: PH158-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:23 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335019**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.49 | J | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 3.5 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 3.5 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 5.7 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.2 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 5.0 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.7 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | J | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.4 | J | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 4.7 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.11 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335019**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,400 | | 43.9 | 7.91 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.39 | U | 4.39 | 0.812 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.05 | | 4.39 | 0.768 | 1 |
| 06946 | Barium | 7440-39-3 | 108 | | 1.10 | 0.0362 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.610 | J | 1.10 | 0.0735 | 1 |
| 07914 | Boron | 7440-42-8 | 1.17 | J | 11.0 | 0.922 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0834 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,330 | | 22.0 | 3.67 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.3 | | 3.29 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.50 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 9.30 | | 2.20 | 0.318 | 1 |
| 01654 | Iron | 7439-89-6 | 20,300 | | 43.9 | 3.97 | 1 |
| 06955 | Lead | 7439-92-1 | 7.81 | | 3.29 | 0.549 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.4 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,070 | | 11.0 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 271 | | 1.10 | 0.0911 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.660 | J | 2.20 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.8 | | 2.20 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 227 | | 11.0 | 3.17 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,330 | | 110 | 9.15 | 1 |
| 01667 | Sodium | 7440-23-5 | 148 | | 110 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.98 | J | 11.0 | 0.241 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.5 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 47.0 | | 4.39 | 0.220 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.89 | J | 5.49 | 0.922 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.141 | J | 0.439 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0415 | J | 0.220 | 0.0285 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.2 | | 0.439 | 0.0746 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.245 | | 0.220 | 0.0329 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0181 | U | 0.0181 | 0.0109 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.32 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.9 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335019**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335019**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0707 JBQ | 1.06 | 0.0650 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.184 J | 5.28 | 0.0436 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0389 JBQ | 5.28 | 0.0291 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.188 JB | 5.28 | 0.0304 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.250 JBQ | 5.28 | 0.0287 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.807 JBQ | 5.28 | 0.0338 | 1 |
| 11031 | OCDD | 3268-87-9 | 9.67 JB | 10.6 | 0.0230 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0752 JQ | 1.06 | 0.0491 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.206 JB | 5.28 | 0.0229 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.198 JBQ | 5.28 | 0.0214 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.183 JB | 5.28 | 0.0292 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.122 JBQ | 5.28 | 0.0278 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.193 JBQ | 5.28 | 0.0304 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0918 JBQ | 5.28 | 0.0272 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.212 JB | 5.28 | 0.0143 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.109 JBQ | 5.28 | 0.0196 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.438 JB | 10.6 | 0.0449 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.232 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 54 | 25 - 164 |
| 13C12-12378-PeCDD | 61 | 25 - 181 |
| 13C12-123478-HxCDD | 75 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 75 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 49 | 24 - 169 |
| 13C12-12378-PeCDF | 57 | 24 - 185 |
| 13C12-23478-PeCDF | 57 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 69 | 29 - 147 |
| 13C12-1234678-HpCDF | 79 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335019**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335019**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 08:31 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016A16A | 01/17/2014 19:44 | Laura M Krieger | 23.11 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401433612 | 01/14/2014 18:30 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401433612 | 01/14/2014 18:31 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 22:42 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 06:01 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 19:02 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:01 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335019**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:17 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:17 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 20:57 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:17 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:25 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335020**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 38 | | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 35 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 34 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 32 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 30 | | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 47 | | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 43 | | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 33 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 34 | | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 36 | | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 48 | | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 32 | | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 42 | | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 36 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 39 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 9.4 | | 1.0 | 0.2 | 23.02 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 160 | | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 170 | | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.4 | | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335020**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.6 | J | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,900 | | 43.9 | 7.91 | 1 |
| 06944 | Antimony | 7440-36-0 | 38.3 | | 4.39 | 0.812 | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.2 | | 4.39 | 0.768 | 1 |
| 06946 | Barium | 7440-39-3 | 317 | | 1.10 | 0.0362 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.01 | | 1.10 | 0.0735 | 1 |
| 07914 | Boron | 7440-42-8 | 219 | | 11.0 | 0.922 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.02 | | 1.10 | 0.0834 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,300 | | 22.0 | 3.67 | 1 |
| 06951 | Chromium | 7440-47-3 | 41.9 | | 3.29 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 57.6 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 38.0 | | 2.20 | 0.318 | 1 |
| 01654 | Iron | 7439-89-6 | 20,300 | | 43.9 | 3.97 | 1 |
| 06955 | Lead | 7439-92-1 | 24.8 | | 3.29 | 0.549 | 1 |
| 01656 | Lithium | 7439-93-2 | 132 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,460 | | 11.0 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 345 | | 1.10 | 0.0911 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 210 | | 2.20 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 64.5 | | 2.20 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 368 | | 11.0 | 3.17 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,650 | | 110 | 9.15 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,220 | | 110 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 397 | | 11.0 | 0.241 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,440 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 96.1 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 103 | | 4.39 | 0.220 | 1 |
| 10146 | Zirconium | 7440-67-7 | 108 | | 5.49 | 0.922 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.45 | | 0.439 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 11.9 | | 0.220 | 0.0285 | 2 |
| 06144 | Strontium | 7440-24-6 | 31.5 | | 0.439 | 0.0746 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.684 | | 0.220 | 0.0329 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.199 | | 0.0179 | 0.0107 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 8.9 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335020**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.4 | B | 1.08 | 0.0930 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 105 | | 5.38 | 0.0551 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 107 | B | 5.38 | 0.0603 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 106 | B | 5.38 | 0.0629 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 104 | B | 5.38 | 0.0590 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 104 | B | 5.38 | 0.0648 | 1 |
| 11031 | OCDD | 3268-87-9 | 210 | B | 10.8 | 0.0441 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.0 | | 1.08 | 0.0713 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 107 | B | 5.38 | 0.0387 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 106 | B | 5.38 | 0.0355 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 108 | B | 5.38 | 0.0608 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 111 | B | 5.38 | 0.0588 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 109 | B | 5.38 | 0.0661 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 111 | B | 5.38 | 0.0599 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 108 | B | 5.38 | 0.0389 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 109 | B | 5.38 | 0.0498 | 1 |
| 11031 | OCDF | 39001-02-0 | 212 | B | 10.8 | 0.0588 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 46 | 25 - 164 |
| 13C12-12378-PeCDD | 54 | 25 - 181 |
| 13C12-123478-HxCDD | 70 | 32 - 141 |
| 13C12-123678-HxCDD | 70 | 28 - 130 |
| 13C12-123789-HxCDD | 70 | 28 - 130 |
| 13C12-1234678-HpCDD | 69 | 23 - 140 |
| 13C12-OCDD | 70 | 17 - 157 |
| 13C12-2378-TCDF | 42 | 24 - 169 |
| 13C12-12378-PeCDF | 49 | 24 - 185 |
| 13C12-23478-PeCDF | 51 | 21 - 178 |
| 13C12-123478-HxCDF | 62 | 26 - 152 |
| 13C12-123678-HxCDF | 64 | 26 - 123 |
| 13C12-234678-HxCDF | 63 | 28 - 136 |
| 13C12-123789-HxCDF | 66 | 29 - 147 |
| 13C12-1234678-HpCDF | 69 | 28 - 143 |
| 13C12-1234789-HpCDF | 61 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335020**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 09:02 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016A16A | 01/17/2014 20:22 | Laura M Krieger | 23.02 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401433612 | 01/14/2014 18:32 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401433612 | 01/14/2014 18:33 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 23:01 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 06:23 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 19:58 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:13 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335020**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:24 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:24 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:02 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:24 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:31 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335021**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 36 | | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 33 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 35 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 30 | | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 47 | | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 46 | | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 33 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 35 | | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 33 | | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 35 | | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 48 | | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 37 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 35 | | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 32 | | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 31 | | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 43 | | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 36 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 39 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 9.0 | | 1.0 | 0.2 | 23.23 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 170 | | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 180 | | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.9 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 7.5 | | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335021**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.2 | J | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,800 | | 43.9 | 7.91 | 1 |
| 06944 | Antimony | 7440-36-0 | 39.3 | | 4.39 | 0.812 | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.1 | | 4.39 | 0.768 | 1 |
| 06946 | Barium | 7440-39-3 | 314 | | 1.10 | 0.0362 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.99 | | 1.10 | 0.0735 | 1 |
| 07914 | Boron | 7440-42-8 | 217 | | 11.0 | 0.922 | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.97 | | 1.10 | 0.0834 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,840 | | 22.0 | 3.67 | 1 |
| 06951 | Chromium | 7440-47-3 | 41.9 | | 3.29 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 57.4 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 37.8 | | 2.20 | 0.318 | 1 |
| 01654 | Iron | 7439-89-6 | 20,200 | | 43.9 | 3.97 | 1 |
| 06955 | Lead | 7439-92-1 | 24.6 | | 3.29 | 0.549 | 1 |
| 01656 | Lithium | 7439-93-2 | 131 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,380 | | 11.0 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 339 | | 1.10 | 0.0911 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 210 | | 2.20 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 64.1 | | 2.20 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 338 | | 11.0 | 3.17 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,620 | | 110 | 9.15 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,210 | | 110 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 396 | | 11.0 | 0.241 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,440 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 94.7 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 102 | | 4.39 | 0.220 | 1 |
| 10146 | Zirconium | 7440-67-7 | 107 | | 5.49 | 0.922 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.37 | | 0.439 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 11.8 | | 0.220 | 0.0285 | 2 |
| 06144 | Strontium | 7440-24-6 | 32.2 | | 0.439 | 0.0746 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.715 | | 0.220 | 0.0329 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.216 | | 0.0178 | 0.0107 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 8.9 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-838-SA5B-SB-4.0-5.0MSD Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7335021**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.2 | B | 1.09 | 0.0994 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 102 | | 5.43 | 0.0476 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 106 | B | 5.43 | 0.0432 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 108 | B | 5.43 | 0.0452 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 105 | B | 5.43 | 0.0429 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 106 | B | 5.43 | 0.0637 | 1 |
| 11031 | OCDD | 3268-87-9 | 210 | B | 10.9 | 0.0461 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.9 | | 1.09 | 0.0770 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 105 | B | 5.43 | 0.0411 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 108 | B | 5.43 | 0.0377 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 110 | B | 5.43 | 0.0537 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 112 | B | 5.43 | 0.0526 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 112 | B | 5.43 | 0.0520 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 111 | B | 5.43 | 0.0508 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 109 | B | 5.43 | 0.0485 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 111 | B | 5.43 | 0.0660 | 1 |
| 11031 | OCDF | 39001-02-0 | 211 | B | 10.9 | 0.0634 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 52 | 25 - 164 |
| 13C12-12378-PeCDD | 60 | 25 - 181 |
| 13C12-123478-HxCDD | 72 | 32 - 141 |
| 13C12-123678-HxCDD | 73 | 28 - 130 |
| 13C12-123789-HxCDD | 71 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 45 | 24 - 169 |
| 13C12-12378-PeCDF | 55 | 24 - 185 |
| 13C12-23478-PeCDF | 54 | 21 - 178 |
| 13C12-123478-HxCDF | 63 | 26 - 152 |
| 13C12-123678-HxCDF | 66 | 26 - 123 |
| 13C12-234678-HxCDF | 64 | 28 - 136 |
| 13C12-123789-HxCDF | 69 | 29 - 147 |
| 13C12-1234678-HpCDF | 73 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 65 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335021**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 09:34 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016A16A | 01/17/2014 20:59 | Laura M Krieger | 23.23 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401433612 | 01/14/2014 18:34 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401433612 | 01/14/2014 18:34 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 23:19 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 06:44 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 20:55 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:17 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335021**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:27 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:27 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:04 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:27 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:37 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0DUP Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335022**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,700 | | 43.9 | 7.91 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.39 | U | 4.39 | 0.812 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.03 | | 4.39 | 0.768 | 1 |
| 06946 | Barium | 7440-39-3 | 96.5 | | 1.10 | 0.0362 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.553 | J | 1.10 | 0.0735 | 1 |
| 07914 | Boron | 7440-42-8 | 1.10 | J | 11.0 | 0.922 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0834 | 1 |
| 01650 | Calcium | 7440-70-2 | 9,890 | | 22.0 | 3.67 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.7 | | 3.29 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.44 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 9.16 | | 2.20 | 0.318 | 1 |
| 01654 | Iron | 7439-89-6 | 18,800 | | 43.9 | 3.97 | 1 |
| 06955 | Lead | 7439-92-1 | 8.47 | | 3.29 | 0.549 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.2 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,990 | | 11.0 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 262 | | 1.10 | 0.0911 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.414 | J | 2.20 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.97 | | 2.20 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 234 | | 11.0 | 3.17 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,200 | | 110 | 9.15 | 1 |
| 01667 | Sodium | 7440-23-5 | 145 | | 110 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.56 | J | 11.0 | 0.241 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.7 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 45.3 | | 4.39 | 0.220 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.17 | J | 5.49 | 0.922 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.159 | J | 0.439 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0349 | J | 0.220 | 0.0285 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.8 | | 0.439 | 0.0746 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.224 | | 0.220 | 0.0329 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0175 | U | 0.0175 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.28 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 8.9 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 9.1 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-838-SA5B-SB-4.0-5.0DUP Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335022**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 14:10 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83840 SDG#: PH158-05DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:09 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:22 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:22 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:00 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:22 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:29 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1138-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335023**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11384 SDG#: PH158-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.24 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 7.9 | J | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1138-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335023**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11384 SDG#: PH158-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,500 | | 44.1 | 7.95 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.41 | U | 4.41 | 0.816 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.29 | J | 4.41 | 0.772 | 1 |
| 06946 | Barium | 7440-39-3 | 106 | | 1.10 | 0.0364 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.664 | J | 1.10 | 0.0739 | 1 |
| 07914 | Boron | 7440-42-8 | 0.989 | J | 11.0 | 0.926 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0838 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,460 | | 22.1 | 3.68 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.5 | | 3.31 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.93 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 8.18 | | 2.21 | 0.320 | 1 |
| 01654 | Iron | 7439-89-6 | 19,800 | | 44.1 | 3.99 | 1 |
| 06955 | Lead | 7439-92-1 | 7.75 | | 3.31 | 0.551 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.4 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,770 | | 11.0 | 1.84 | 1 |
| 06958 | Manganese | 7439-96-5 | 277 | | 1.10 | 0.0915 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.217 | J | 2.21 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.8 | | 2.21 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 149 | | 11.0 | 3.19 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,660 | | 110 | 9.20 | 1 |
| 01667 | Sodium | 7440-23-5 | 96.2 | J | 110 | 18.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.09 | J | 11.0 | 0.243 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.7 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 43.8 | | 4.41 | 0.221 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.39 | J | 5.51 | 0.926 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.148 | J | 0.441 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0540 | J | 0.221 | 0.0287 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.8 | | 0.441 | 0.0750 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.237 | | 0.221 | 0.0331 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0183 | U | 0.0183 | 0.0110 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.24 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.3 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1138-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335023**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11384 SDG#: PH158-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1138-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335023**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11384 SDG#: PH158-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.173 | JB | 1.08 | 0.0860 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.314 | JQ | 5.40 | 0.0506 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.142 | JBQ | 5.40 | 0.0358 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.125 | JBQ | 5.40 | 0.0386 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.207 | JBQ | 5.40 | 0.0376 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.649 | JBQ | 5.40 | 0.0442 | 1 |
| 11031 | OCDD | 3268-87-9 | 11.1 | B | 10.8 | 0.0365 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.08 | U | 1.08 | 0.0637 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.272 | JBQ | 5.40 | 0.0340 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.206 | JB | 5.40 | 0.0309 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.169 | JB | 5.40 | 0.0288 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.151 | JBQ | 5.40 | 0.0274 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.174 | JB | 5.40 | 0.0313 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.131 | JBQ | 5.40 | 0.0283 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.190 | JBQ | 5.40 | 0.0180 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.166 | JBQ | 5.40 | 0.0260 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.518 | JBQ | 10.8 | 0.0537 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.273 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 43 | 25 - 164 |
| 13C12-12378-PeCDD | 49 | 25 - 181 |
| 13C12-123478-HxCDD | 66 | 32 - 141 |
| 13C12-123678-HxCDD | 65 | 28 - 130 |
| 13C12-123789-HxCDD | 63 | 28 - 130 |
| 13C12-1234678-HpCDD | 65 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 39 | 24 - 169 |
| 13C12-12378-PeCDF | 44 | 24 - 185 |
| 13C12-23478-PeCDF | 44 | 21 - 178 |
| 13C12-123478-HxCDF | 56 | 26 - 152 |
| 13C12-123678-HxCDF | 58 | 26 - 123 |
| 13C12-234678-HxCDF | 57 | 28 - 136 |
| 13C12-123789-HxCDF | 58 | 29 - 147 |
| 13C12-1234678-HpCDF | 68 | 28 - 143 |
| 13C12-1234789-HpCDF | 56 | 26 - 138 |
| 13C12-OCDF | 54 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1138-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335023**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11384 SDG#: PH158-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1138-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335023**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11384 SDG#: PH158-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14016SLC026 | 01/21/2014 11:40 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14016SLC026 | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016A16A | 01/17/2014 19:06 | Laura M Krieger | 22.24 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401433612 | 01/14/2014 18:36 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401433612 | 01/14/2014 18:36 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140160015A | 01/20/2014 23:38 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140160015A | 01/17/2014 08:05 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140170002A | 01/18/2014 07:05 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140170002A | 01/17/2014 16:40 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14017001 | 01/20/2014 21:51 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14017001 | 01/17/2014 12:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140140637001 | 01/15/2014 07:48 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1138-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7335023**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 13:40 by KL

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11384 SDG#: PH158-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 140140637001B | 01/23/2014 18:46 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:46 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 21:18 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140140637001A | 01/23/2014 18:46 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140140638001 | 01/15/2014 11:39 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140140637001 | 01/14/2014 23:13 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140140638001 | 01/15/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401A | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-011314 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7335024**
**LL Group # 1445714**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/13/2014 08:00

Submitted: 01/14/2014 10:00
Reported: 01/24/2014 14:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB113 SDG#: PH158-07TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14016A94A | 01/17/2014 14:16 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14016A94A | 01/17/2014 14:16 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14016SLC026 | Sample number(s): 7335015-7335021,7335023 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 87 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 118 | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 118 | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 86 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 79-112 | | |
| Batch number: 14016A16A | Sample number(s): 7335016-7335017,7335019-7335021,7335023 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 84 | | 67-119 | | |
| Batch number: 14016A94A | Sample number(s): 7335024 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 113 | 112 | 75-135 | 1 | 30 |
| Batch number: 140160015A | Sample number(s): 7335015-7335021,7335023 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 84 | 85 | 36-106 | 2 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 96 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 99 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 140170002A | Sample number(s): 7335015-7335021,7335023 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 96 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 96 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 71 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 60-115 | | |
| Batch number: 140140637001 | Sample number(s): 7335015-7335023 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 104 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 102 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 100 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 96 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 97 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 101 | | 80-120 | | |
| Calcium | 4.67 | J | 20.0 | 3.34 | mg/kg | 100 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 98 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 101 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 102 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 106 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 100 | | 80-120 | | |
| Magnesium | 4.40 | J | 10.0 | 1.67 | mg/kg | 101 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 100 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 105 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 102 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 98 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 98 | | 80-120 | | |
| Tin | 1.59 | J | 10.0 | 0.220 | mg/kg | 100 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 101 | | 80-120 | | |
| Zinc | 0.462 | J | 4.00 | 0.200 | mg/kg | 101 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Batch number: 140140637001A | Sample number(s): 7335015-7335023 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 107 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 104 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 108 | | 80-120 | | |
| Batch number: 140140637001B | Sample number(s): 7335015-7335023 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 108 | | 80-120 | | |
| Batch number: 140140638001 | Sample number(s): 7335015-7335023 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 96 | | 85-120 | | |
| Batch number: 14016039401A | Sample number(s): 7335015-7335019,7335022-7335023 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14022162401A | Sample number(s): 7335015-7335023 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14017001 | Sample number(s): 7335015-7335021,7335023 | | | | | | | | |
| 2378-TCDD | 0.126 J | 1.00 | 0.0693 | ng/kg | 95 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0372 | ng/kg | 99 | | 70-142 | | |
| 123478-HxCDD | 0.0344 J | 5.00 | 0.0258 | ng/kg | 98 | | 70-164 | | |
| 123678-HxCDD | 0.0345 J | 5.00 | 0.0281 | ng/kg | 103 | | 76-134 | | |
| 123789-HxCDD | 0.0671 J | 5.00 | 0.0265 | ng/kg | 100 | | 64-162 | | |
| 1234678-HpCDD | 0.104 J | 5.00 | 0.0270 | ng/kg | 99 | | 70-140 | | |
| OCDD | 0.219 J | 10.0 | 0.0227 | ng/kg | 99 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0552 | ng/kg | 100 | | 75-158 | | |
| 12378-PeCDF | 0.0576 J | 5.00 | 0.0233 | ng/kg | 101 | | 80-134 | | |
| 23478-PeCDF | 0.0516 J | 5.00 | 0.0215 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.0591 J | 5.00 | 0.0208 | ng/kg | 102 | | 72-134 | | |
| 123678-HxCDF | 0.0455 J | 5.00 | 0.0198 | ng/kg | 104 | | 84-130 | | |
| 123789-HxCDF | 0.0371 J | 5.00 | 0.0218 | ng/kg | 104 | | 78-130 | | |
| 234678-HxCDF | 0.0389 J | 5.00 | 0.0200 | ng/kg | 106 | | 70-156 | | |
| 1234678-HpCDF | 0.0794 J | 5.00 | 0.0111 | ng/kg | 103 | | 82-122 | | |
| 1234789-HpCDF | 0.0738 J | 5.00 | 0.0141 | ng/kg | 105 | | 78-138 | | |
| OCDF | 0.191 J | 10.0 | 0.0343 | ng/kg | 100 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00639 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14016SLC026 | Sample number(s): 7335015-7335021,7335023 UNSPK: 7335019 | | | | | | | | |
| Acenaphthene | 105 | 99 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 96 | 91 | 49-121 | 6 | 30 | | | | |
| Anthracene | 92 | 96 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 84 | 85 | 44-143 | 0 | 30 | | | | |
| Benzo(a)pyrene | 79 | 81 | 44-140 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 76 | 80 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 82 | 84 | 70-130 | 2 | 30 | | | | |
| Benzo(g,h,i)perylene | 86 | 90 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 85 | 85 | 54-142 | 0 | 30 | | | | |
| Butylbenzylphthalate | 130 | 129 | 49-151 | 0 | 30 | | | | |
| Di-n-butylphthalate | 120 | 127 | 52-147 | 5 | 30 | | | | |
| Chrysene | 77 | 77 | 29-148 | 0 | 30 | | | | |
| Dibenz(a,h)anthracene | 96 | 98 | 20-137 | 3 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Diethylphthalate | 94 | 92 | 43-145 | 2 | 30 | | | | |
| Dimethylphthalate | 100 | 97 | 58-129 | 2 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 134 | 132 | 39-167 | 1 | 30 | | | | |
| Fluoranthene | 84 | 92 | 40-148 | 8 | 30 | | | | |
| Fluorene | 89 | 90 | 51-137 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 90 | 92 | 17-136 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 92 | 89 | 50-131 | 3 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 92 | 35-152 | 3 | 30 | | | | |
| Naphthalene | 96 | 92 | 31-148 | 4 | 30 | | | | |
| N-Nitrosodimethylamine | 91 | 85 | 48-113 | 6 | 30 | | | | |
| Di-n-octylphthalate | 116 | 118 | 52-162 | 2 | 30 | | | | |
| Phenanthrene | 96 | 95 | 29-142 | 1 | 30 | | | | |
| Pyrene | 94 | 95 | 26-143 | 1 | 30 | | | | |
| Batch number: 14016A16A | Sample number(s): 7335016-7335017,7335019-7335021,7335023 UNSPK: 7335019 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 85 | 81 | 69-123 | 4 | 30 | | | | |
| Batch number: 140160015A | Sample number(s): 7335015-7335021,7335023 UNSPK: 7335019 | | | | | | | | |
| PCB-1016 | 88 | 94 | 41-135 | 6 | 50 | | | | |
| PCB-1260 | 92 | 97 | 40-134 | 6 | 50 | | | | |
| Batch number: 140170002A | Sample number(s): 7335015-7335021,7335023 UNSPK: 7335019 | | | | | | | | |
| EFH (C12-C14) | 99 | 89 | 49-123 | 10 | 20 | | | | |
| EFH (C15-C20) | 101 | 91 | 49-123 | 11 | 20 | | | | |
| EFH (C21-C30) | 101 | 90 | 49-123 | 12 | 20 | | | | |
| EFH (C30-C40) | 82 | 72 | 49-123 | 12 | 20 | | | | |
| EFH (C8-C11) | 84 | 75 | 49-123 | 11 | 20 | | | | |
| Batch number: 140140637001 | Sample number(s): 7335015-7335023 UNSPK: 7335019 BKG: 7335019 | | | | | | | | |
| Aluminum | 1606 (2) | 1545 (2) | 75-125 | 1 | 20 | 14,900 | 14,300 | 4 | 20 |
| Antimony | 70* | 72* | 75-125 | 3 | 20 | 4.00 U | 4.00 U | 0 (1) | 20 |
| Arsenic | 98 | 97 | 75-125 | 1 | 20 | 4.60 | 4.58 | 0 (1) | 20 |
| Barium | 95 | 94 | 75-125 | 1 | 20 | 98.8 | 88.0 | 12 | 20 |
| Beryllium | 98 | 98 | 75-125 | 0 | 20 | 0.556 J | 0.504 J | 10 (1) | 20 |
| Boron | 99 | 98 | 75-125 | 1 | 20 | 1.07 J | 1.00 J | 6 (1) | 20 |
| Cadmium | 91 | 91 | 75-125 | 1 | 20 | 1.00 U | 1.00 U | 0 (1) | 20 |
| Calcium | 223 (2) | 117 (2) | 75-125 | 9 | 20 | 3,940 | 9,010 | 78* | 20 |
| Chromium | 103 | 103 | 75-125 | 0 | 20 | 17.6 | 16.2 | 8 | 20 |
| Cobalt | 97 | 96 | 75-125 | 0 | 20 | 4.10 | 4.04 | 1 (1) | 20 |
| Copper | 104 | 104 | 75-125 | 0 | 20 | 8.48 | 8.35 | 2 (1) | 20 |
| Iron | 51 (2) | -112 (2) | 75-125 | 1 | 20 | 18,500 | 17,200 | 7 | 20 |
| Lead | 103 | 102 | 75-125 | 1 | 20 | 7.12 | 7.71 | 8 (1) | 20 |
| Lithium | 101 | 100 | 75-125 | 1 | 20 | 19.5 | 18.4 | 6 (1) | 20 |
| Magnesium | 180 (2) | 142 (2) | 75-125 | 2 | 20 | 3,700 | 3,640 | 2 | 20 |
| Manganese | 135 (2) | 125 (2) | 75-125 | 2 | 20 | 247 | 239 | 3 | 20 |
| Molybdenum | 95 | 95 | 75-125 | 0 | 20 | 0.601 J | 0.377 J | 46* (1) | 20 |
| Nickel | 98 | 97 | 75-125 | 1 | 20 | 9.87 | 9.08 | 8 (1) | 20 |
| Phosphorus | 128* | 102 | 75-125 | 8 | 20 | 207 | 213 | 3 | 20 |
| Potassium | 121 | 118 | 75-125 | 1 | 20 | 2,120 | 2,000 | 6 | 20 |
| Sodium | 97 | 97 | 75-125 | 0 | 20 | 135 | 132 | 3 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tin | 90 | 89 | 75-125 | 0 | 20 | 2.71 | J | 2.33 | J | 15 (1) | 20 |
| Titanium | 266 (2) | 264 (2) | 75-125 | 0 | 20 | 1,050 | | 1,010 | | 4 | 20 |
| Vanadium | 107 | 104 | 75-125 | 2 | 20 | 34.2 | | 31.6 | | 8 | 20 |
| Zinc | 101 | 99 | 75-125 | 1 | 20 | 42.8 | | 41.2 | | 4 | 20 |
| Zirconium | 97 | 96 | 75-125 | 1 | 20 | 1.72 | J | 2.89 | J | 51* (1) | 20 |
| Batch number: 140140637001A | Sample number(s): 7335015-7335023 UNSPK: 7335019 BKG: 7335019 | | | | | | | | | | |
| Silver | 108 | 107 | 75-125 | 1 | 20 | 0.0378 | J | 0.0318 | J | 17 (1) | 20 |
| Strontium | 95 | 103 | 75-125 | 2 | 20 | 21.1 | | 24.4 | | 15 | 20 |
| Thallium | 100 | 107 | 75-125 | 4 | 20 | 0.223 | | 0.204 | | 9 (1) | 20 |
| Batch number: 140140637001B | Sample number(s): 7335015-7335023 UNSPK: 7335019 BKG: 7335019 | | | | | | | | | | |
| Selenium | 105 | 102 | 75-125 | 3 | 20 | 0.129 | J | 0.145 | J | 12 (1) | 20 |
| Batch number: 140140638001 | Sample number(s): 7335015-7335023 UNSPK: 7335019 BKG: 7335019 | | | | | | | | | | |
| 3a Mercury 7471A | 111 | 122 | 65-135 | 8 | 20 | 0.0165 | U | 0.0159 | U | 0 (1) | 20 |
| Batch number: 14016039401A | Sample number(s): 7335015-7335019,7335022-7335023 BKG: 7335019 | | | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.32 | | 7.28 | | 1 | 3 |
| Batch number: 14022162401A | Sample number(s): 7335015-7335023 BKG: 7335019 | | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 8.9 | | 9.1 | | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 8.9 | | 9.1 | | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 8.9 | | 9.1 | | 2 | 20 |
| Batch number: 14017001 | Sample number(s): 7335015-7335021,7335023 UNSPK: 7335019 | | | | | | | | | | |
| 2378-TCDD | 94 | 93 | 40-135 | 1 | 20 | | | | | | |
| 12378-PeCDD | 97 | 93 | 40-135 | 3 | 20 | | | | | | |
| 123478-HxCDD | 100 | 97 | 40-135 | 2 | 20 | | | | | | |
| 123678-HxCDD | 99 | 99 | 40-135 | 1 | 20 | | | | | | |
| 123789-HxCDD | 96 | 97 | 40-135 | 2 | 20 | | | | | | |
| 1234678-HpCDD | 96 | 97 | 40-135 | 2 | 20 | | | | | | |
| OCDD | 93 | 92 | 40-135 | 0 | 20 | | | | | | |
| 2378-TCDF | 97 | 96 | 40-135 | 0 | 20 | | | | | | |
| 12378-PeCDF | 99 | 96 | 40-135 | 2 | 20 | | | | | | |
| 23478-PeCDF | 98 | 99 | 40-135 | 2 | 20 | | | | | | |
| 123478-HxCDF | 100 | 101 | 40-135 | 2 | 20 | | | | | | |
| 123678-HxCDF | 103 | 103 | 40-135 | 0 | 20 | | | | | | |
| 123789-HxCDF | 102 | 103 | 40-135 | 2 | 20 | | | | | | |
| 234678-HxCDF | 103 | 102 | 40-135 | 0 | 20 | | | | | | |
| 1234678-HpCDF | 101 | 100 | 40-135 | 1 | 20 | | | | | | |
| 1234789-HpCDF | 101 | 102 | 40-135 | 2 | 20 | | | | | | |
| OCDF | 98 | 97 | 40-135 | 0 | 20 | | | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

## Surrogate Quality Control

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14016SLC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7335015 | 76 | 75 | 86 |
| 7335016 | 80 | 79 | 91 |
| 7335017 | 68 | 66 | 78 |
| 7335018 | 76 | 77 | 85 |
| 7335019 | 79 | 79 | 87 |
| 7335020 | 76 | 76 | 90 |
| 7335021 | 83 | 78 | 87 |
| 7335023 | 81 | 79 | 90 |
| Blank | 84 | 80 | 86 |
| LCS | 84 | 81 | 89 |
| MS | 76 | 76 | 90 |
| MSD | 83 | 78 | 87 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14016A16A

| | Trifluorotoluene-F |
|---|---|
| 7335016 | 86 |
| 7335017 | 83 |
| 7335019 | 85 |
| 7335020 | 86 |
| 7335021 | 79 |
| 7335023 | 84 |
| Blank | 90 |
| LCS | 97 |
| MS | 86 |
| MSD | 79 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14016A94A

| | Trifluorotoluene-F |
|---|---|
| 7335024 | 85 |
| Blank | 86 |
| LCS | 90 |
| LCSD | 91 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 140160015A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7335015 | 112 | 102 |
| 7335016 | 115 | 102 |
| 7335017 | 101 | 91 |
| 7335018 | 104 | 94 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7335019 | 109 | 102 |
| 7335020 | 101 | 101 |
| 7335021 | 105 | 105 |
| 7335023 | 107 | 100 |
| Blank | 114 | 111 |
| LCS | 108 | 105 |
| LCSD | 119 | 115 |
| MS | 101 | 101 |
| MSD | 105 | 105 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 140170002A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7335015 | 91 | 90 |
| 7335016 | 92 | 85 |
| 7335017 | 96 | 80 |
| 7335018 | 89 | 86 |
| 7335019 | 92 | 90 |
| 7335020 | 100 | 98 |
| 7335021 | 91 | 89 |
| 7335023 | 88 | 84 |
| Blank | 91 | 89 |
| LCS | 95 | 94 |
| MS | 100 | 98 |
| MSD | 91 | 89 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14017001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7335015 | 66 | 66 | 76 | 78 | 77 | 81 |
| 7335016 | 51 | 57 | 69 | 72 | 71 | 72 |
| 7335017 | 52 | 58 | 69 | 71 | 71 | 74 |
| 7335018 | 39 | 44 | 55 | 58 | 58 | 59 |
| 7335019 | 54 | 57 | 68 | 72 | 69 | 69 |
| 7335020 | 46 | 51 | 62 | 64 | 63 | 66 |
| 7335021 | 52 | 54 | 63 | 66 | 64 | 69 |
| 7335023 | 43 | 44 | 56 | 58 | 57 | 58 |
| Blank | 62 | 70 | 82 | 84 | 84 | 87 |
| MS | 46 | 51 | 62 | 64 | 63 | 66 |
| MSD | 52 | 54 | 63 | 66 | 64 | 69 |
| OPR | 57 | 64 | 74 | 77 | 76 | 80 |
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |

| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
|---|---|---|---|---|---|---|
| 7335015 | 82 | 74 | 73 | 68 | 82 | 81 |
| 7335016 | 79 | 68 | 67 | 61 | 76 | 76 |
| 7335017 | 78 | 70 | 68 | 62 | 77 | 78 |
| 7335018 | 69 | 58 | 58 | 47 | 63 | 62 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1445714
Reported: 01/24/14 at 02:21 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7335019 | 79 | 65 | 63 | 61 | 75 | 77 |
| 7335020 | 69 | 61 | 61 | 54 | 70 | 70 |
| 7335021 | 73 | 64 | 65 | 60 | 72 | 73 |
| 7335023 | 68 | 56 | 54 | 49 | 66 | 65 |
| Blank | 94 | 85 | 85 | 76 | 91 | 89 |
| MS | 69 | 61 | 61 | 54 | 70 | 70 |
| MSD | 73 | 64 | 65 | 60 | 72 | 73 |
| OPR | 85 | 76 | 77 | 67 | 81 | 81 |
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |

| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF |
|---|---|---|---|---|---|
| 7335015 | 81 | 80 | 79 | 62 | 66 |
| 7335016 | 76 | 76 | 75 | 48 | 55 |
| 7335017 | 75 | 76 | 75 | 49 | 56 |
| 7335018 | 63 | 66 | 67 | 35 | 43 |
| 7335019 | 75 | 76 | 75 | 49 | 57 |
| 7335020 | 70 | 69 | 70 | 42 | 49 |
| 7335021 | 71 | 72 | 74 | 45 | 55 |
| 7335023 | 63 | 65 | 65 | 39 | 44 |
| Blank | 89 | 92 | 94 | 57 | 68 |
| MS | 70 | 69 | 70 | 42 | 49 |
| MSD | 71 | 72 | 74 | 45 | 55 |
| OPR | 80 | 83 | 84 | 52 | 62 |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 1/13/2014 A-13013
CarrierName: FedEx
AirbillNo: 797623860084 G-1445714
S-7335015-24

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140113-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-840-SA5B-SB-0.0-0.5 | 1/13/14 10:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-0.0-0.5 | 1/13/14 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-4.0-5.0 | 1/13/14 10:40 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-4.0-5.0 | 1/13/14 10:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-7.0-8.0 | 1/13/14 10:45 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-7.0-8.0 | 1/13/14 10:45 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-838-SA5B-SB-0.0-0.5 | 1/13/14 13:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-838-SA5B-SB-0.0-0.5 | 1/13/14 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-838-SA5B-SB-4.0-5.0MS | 1/13/14 14:10 | SO | None | 6 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | MS/MSD |
| SL-838-SA5B-SB-4.0-5.0MS | 1/13/14 14:10 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | MS/MSD |
| SL-1138-SA5B-SB-4.0-5.0 | 1/13/14 13:40 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-1138-SA5B-SB-4.0-5.0 | 1/13/14 13:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** [signature]

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steve Myrel | 01/13/2013 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 1/14/14 | 1000 |

COC Rev 3

COC: 20140113-01, Page 1 of 1

Amended COC

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 1/13/2014 A-13013
CarrierName: FedEx
AirbillNo: 797623860084 G-1445714
S-7335015-24

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140113-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-840-SA5B-SB-0.0-0.5 | 1/13/14 10:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-0.0-0.5 | 1/13/14 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-4.0-5.0 | 1/13/14 10:40 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-4.0-5.0 | 1/13/14 10:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-7.0-8.0 | 1/13/14 10:45 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-840-SA5B-SB-7.0-8.0 | 1/13/14 10:45 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-838-SA5B-SB-0.0-0.5 | 1/13/14 13:30 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-838-SA5B-SB-0.0-0.5 | 1/13/14 13:30 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-838-SA5B-SB-4.0-5.0MS | 1/13/14 14:10 | SO | None | 6 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | MS/MSD |
| SL-838-SA5B-SB-4.0-5.0MS | 1/13/14 14:10 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | MS/MSD |
| SL-1138-SA5B-SB-4.0-5.0 | 1/13/14 13:40 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-1138-SA5B-SB-4.0-5.0 | 1/13/14 13:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| TB-011314 | 1/13/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** K Lawson

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Shey Myers | 01/13/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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# Sample Administration Receipt Documentation Log

Doc Log ID: 2166

Client: CDM SMITH

G-1445714

**SSFL PHASE 3**

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 01/14/2014 10:00 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Trip Blank Present: | Yes |
| Custody Seal Present: | Yes | Trip Blank Indicated on COC: | No |
| Custody Seal Intact: | Yes | Trip Blank Type: | HCL |
| Samples Chilled: | Yes | Trip Blank Qty: | 3 |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | Air Quality Flow Controllers Present: | N/A |
| Missing Samples: | No | Flow Controller Quantity: | 0 |
| Extra Samples: | Yes | Air Quality Returns: | N/A |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace at least 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Corey Eshleman (3647) at 10:24 on 01/14/2014

## Samples Chilled Details: SSFL PHASE 3

| Cooler # | Thermometer ID | Raw Temp (°C) | Corrected Temp (°C) | Thermometer Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 0.8 | 0.8 | DT | Wet | Y | Bagged | N |

## Extra Sample Details: SSFL PHASE 3

| Sample ID on Label | Number of Extra Containers | Date on Label | Comments |
|---|---|---|---|
| TB-011314 | 3 | 1/13/2014 08:00 | |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

January 31, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 01/15/2014
Group Number: 1446014
SDG: PH159
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-839-SA5B-SB-0.0-0.5 Soil | 7336139 |
| SL-839-SA5B-SB-4.0-5.0 Soil | 7336140 |
| SL-839-SA5B-SB-4.0-5.0 Soil | 7336141 |
| SL-839-SA5B-SB-4.0-5.0 Soil | 7336142 |
| SL-839-SA5B-SB-4.0-5.0 Soil | 7336143 |
| SL-1139-SA5B-SB-4.0-5.0 Soil | 7336144 |
| SL-839-SA5B-SB-9.0-10.0 Soil | 7336145 |
| SL-839-SA5B-SB-15.5-16.5 Soil | 7336146 |
| SL-843-SA5B-SB-0.0-0.5 Soil | 7336147 |
| SL-843-SA5B-SB-4.0-5.0 Soil | 7336148 |
| SL-843-SA5B-SB-7.0-8.0 Soil | 7336149 |
| TB-011414 Water | 7336150 |
| EB-011414 Water | 7336151 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-839-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336139**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:00 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83900 SDG#: PH159-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 2.8 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 18 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 11 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 15 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 7.2 | J | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.4 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 8.0 | | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 19 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.99 | J | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 38 | | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.6 | | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 6.1 | | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 54 | | 1.8 | 0.71 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 61 | | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336139**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:00 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83900 SDG#: PH159-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,600 | | 42.2 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.22 | U | 4.22 | 0.781 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.97 | | 4.22 | 0.739 | 1 |
| 06946 | Barium | 7440-39-3 | 103 | | 1.06 | 0.0348 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.725 | J | 1.06 | 0.0707 | 1 |
| 07914 | Boron | 7440-42-8 | 1.26 | J | 10.6 | 0.887 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0802 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,870 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.3 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.67 | | 1.06 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 17.9 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 23,800 | | 42.2 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 6.80 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.5 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,040 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 361 | | 1.06 | 0.0876 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.264 | J | 2.11 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.5 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 360 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,890 | | 106 | 8.80 | 1 |
| 01667 | Sodium | 7440-23-5 | 196 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.22 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 1.06 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.7 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 58.4 | | 4.22 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.38 | J | 5.28 | 0.887 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.145 | J | 0.422 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0715 | J | 0.211 | 0.0274 | 2 |
| 06144 | Strontium | 7440-24-6 | 28.5 | | 0.422 | 0.0718 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.285 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0231 | | 0.0174 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.08 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336139**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:00 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83900 SDG#: PH159-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0670 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0469 | JQ | 5.18 | 0.0386 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.18 | U | 5.18 | 0.0292 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.175 | JBQ | 5.18 | 0.0304 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.261 | JB | 5.18 | 0.0288 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.448 | JBQ | 5.18 | 0.0290 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.52 | JB | 10.4 | 0.0563 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 | U | 1.04 | 0.0591 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0263 | JBQ | 5.18 | 0.0222 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.103 | JBQ | 5.18 | 0.0206 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0681 | JBQ | 5.18 | 0.0233 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0935 | JBQ | 5.18 | 0.0234 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.219 | JB | 5.18 | 0.0253 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0752 | JB | 5.18 | 0.0242 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.143 | JBQ | 5.18 | 0.0111 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0755 | JBQ | 5.18 | 0.0139 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.408 | JB | 10.4 | 0.0464 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0570 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 58 | 25 - 164 |
| 13C12-12378-PeCDD | 61 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 73 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 64 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 58 | 24 - 185 |
| 13C12-23478-PeCDF | 59 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 69 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 74 | 28 - 143 |
| 13C12-1234789-HpCDF | 69 | 26 - 138 |
| 13C12-OCDF | 58 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336139**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:00 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83900 SDG#: PH159-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336139**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:00 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83900 SDG#: PH159-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 09:19 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 13:52 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 17:03 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/23/2014 19:57 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:02 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:34 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:34 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:34 | Deborah A Krady | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336139**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:00 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83900 SDG#: PH159-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 11:59 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140160638002 | 01/21/2014 11:00 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140160638002 | 01/17/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401A | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336140**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.75 | J | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 4.1 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.4 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 6.0 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.96 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.5 | | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 14 | | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 5.8 | | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.1 | J | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.76 | J | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.1 | | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 7.0 | | 1.8 | 0.73 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.2 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 7.8 | J | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336140**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,800 | | 43.6 | 7.86 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.36 | U | 4.36 | 0.807 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.40 | | 4.36 | 0.763 | 1 |
| 06946 | Barium | 7440-39-3 | 99.0 | | 1.09 | 0.0360 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.712 | J | 1.09 | 0.0731 | 1 |
| 07914 | Boron | 7440-42-8 | 1.66 | J | 10.9 | 0.916 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.09 | U | 1.09 | 0.0829 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,510 | | 21.8 | 3.64 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.4 | | 3.27 | 0.174 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.36 | | 1.09 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 17.3 | | 2.18 | 0.316 | 1 |
| 01654 | Iron | 7439-89-6 | 22,200 | | 43.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 6.13 | | 3.27 | 0.545 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.6 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,750 | | 10.9 | 1.82 | 1 |
| 06958 | Manganese | 7439-96-5 | 319 | | 1.09 | 0.0905 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.13 | J | 2.18 | 0.185 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.5 | | 2.18 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 345 | | 10.9 | 3.15 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,770 | | 109 | 9.09 | 1 |
| 01667 | Sodium | 7440-23-5 | 175 | | 109 | 18.2 | 1 |
| 06969 | Tin | 7440-31-5 | 3.30 | J | 10.9 | 0.240 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,220 | | 1.09 | 0.185 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.9 | | 1.09 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.6 | | 4.36 | 0.218 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.37 | J | 5.45 | 0.916 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.436 | U | 0.436 | 0.109 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0355 | J | 0.218 | 0.0284 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.3 | | 0.436 | 0.0741 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.260 | | 0.218 | 0.0327 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0182 | U | 0.0182 | 0.0109 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 19.3 C. | n.a. | 7.42 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.2 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336140**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336140**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.08 | U | 1.08 | 0.0837 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0930 | JQ | 5.42 | 0.0567 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.42 | U | 5.42 | 0.0372 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.175 | JBQ | 5.42 | 0.0399 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.299 | JB | 5.42 | 0.0366 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.258 | JBQ | 5.42 | 0.0321 | 1 |
| 11031 | OCDD | 3268-87-9 | 2.31 | JBQ | 10.8 | 0.0968 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.08 | U | 1.08 | 0.0710 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.110 | JBQ | 5.42 | 0.0383 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0880 | JBQ | 5.42 | 0.0357 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0493 | JBQ | 5.42 | 0.0271 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0734 | JBQ | 5.42 | 0.0264 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.254 | JB | 5.42 | 0.0308 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0581 | JB | 5.42 | 0.0263 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.105 | JBQ | 5.42 | 0.0144 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0310 | JBQ | 5.42 | 0.0178 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.257 | JBQ | 10.8 | 0.0631 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0611 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 57 | 25 - 164 |
| 13C12-12378-PeCDD | 59 | 25 - 181 |
| 13C12-123478-HxCDD | 71 | 32 - 141 |
| 13C12-123678-HxCDD | 68 | 28 - 130 |
| 13C12-123789-HxCDD | 69 | 28 - 130 |
| 13C12-1234678-HpCDD | 68 | 23 - 140 |
| 13C12-OCDD | 47 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 57 | 24 - 185 |
| 13C12-23478-PeCDF | 58 | 21 - 178 |
| 13C12-123478-HxCDF | 64 | 26 - 152 |
| 13C12-123678-HxCDF | 66 | 26 - 123 |
| 13C12-234678-HxCDF | 65 | 28 - 136 |
| 13C12-123789-HxCDF | 66 | 29 - 147 |
| 13C12-1234678-HpCDF | 69 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336140**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336140**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 07:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 03:55 | Laura M Krieger | 25.2 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:23 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:24 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 14:11 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 16:20 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/23/2014 20:53 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336140**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:38 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:20 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:20 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:20 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 11:49 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 10:54 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336141**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 37 | | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 35 | | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 39 | | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 39 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 38 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 44 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 35 | | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 18 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 38 | | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 50 | | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 41 | | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 37 | | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 24 | | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 38 | | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 37 | | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 54 | | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 40 | | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 33 | | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 22 | | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 35 | | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 36 | | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 37 | | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 27 | | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 63 | | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 38 | | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 56 | | 1.8 | 0.73 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 9.0 | | 1.1 | 0.2 | 24.75 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 160 | | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 120 | | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 160 | | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.7 | | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336141**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 15 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 16 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.5 | J | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,800 | | 43.6 | 7.86 | 1 |
| 06944 | Antimony | 7440-36-0 | 37.8 | | 4.36 | 0.807 | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.3 | | 4.36 | 0.763 | 1 |
| 06946 | Barium | 7440-39-3 | 325 | | 1.09 | 0.0360 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.22 | | 1.09 | 0.0731 | 1 |
| 07914 | Boron | 7440-42-8 | 208 | | 10.9 | 0.916 | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.60 | | 1.09 | 0.0829 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,280 | | 21.8 | 3.64 | 1 |
| 06951 | Chromium | 7440-47-3 | 46.4 | | 3.27 | 0.174 | 1 |
| 06952 | Cobalt | 7440-48-4 | 57.1 | | 1.09 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 46.1 | | 2.18 | 0.316 | 1 |
| 01654 | Iron | 7439-89-6 | 23,500 | | 43.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 22.1 | | 3.27 | 0.545 | 1 |
| 01656 | Lithium | 7439-93-2 | 135 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,270 | | 10.9 | 1.82 | 1 |
| 06958 | Manganese | 7439-96-5 | 435 | | 1.09 | 0.0905 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 204 | | 2.18 | 0.185 | 1 |
| 06961 | Nickel | 7440-02-0 | 65.8 | | 2.18 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 438 | | 10.9 | 3.15 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,990 | | 109 | 9.09 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,230 | | 109 | 18.2 | 1 |
| 06969 | Tin | 7440-31-5 | 385 | | 10.9 | 0.240 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,470 | | 1.09 | 0.185 | 1 |
| 06971 | Vanadium | 7440-62-2 | 97.2 | | 1.09 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 107 | | 4.36 | 0.218 | 1 |
| 10146 | Zirconium | 7440-67-7 | 108 | | 5.45 | 0.916 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.42 | | 0.436 | 0.109 | 2 |
| 06142 | Silver | 7440-22-4 | 11.9 | | 0.218 | 0.0284 | 2 |
| 06144 | Strontium | 7440-24-6 | 35.8 | | 0.436 | 0.0741 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.740 | | 0.218 | 0.0327 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.188 | | 0.0174 | 0.0105 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 9.2 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336141**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.6 | | 1.09 | 0.103 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 105 | | 5.46 | 0.0674 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 106 | B | 5.46 | 0.0486 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 107 | B | 5.46 | 0.0520 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 106 | B | 5.46 | 0.0486 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 105 | B | 5.46 | 0.0549 | 1 |
| 11031 | OCDD | 3268-87-9 | 213 | B | 10.9 | 0.0555 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.9 | | 1.09 | 0.0777 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 106 | B | 5.46 | 0.0430 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 106 | B | 5.46 | 0.0396 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 111 | B | 5.46 | 0.0509 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 111 | B | 5.46 | 0.0495 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 109 | B | 5.46 | 0.0484 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 109 | B | 5.46 | 0.0485 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 109 | B | 5.46 | 0.0448 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 108 | B | 5.46 | 0.0548 | 1 |
| 11031 | OCDF | 39001-02-0 | 211 | B | 10.9 | 0.0580 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 54 | 25 - 164 |
| 13C12-12378-PeCDD | 57 | 25 - 181 |
| 13C12-123478-HxCDD | 69 | 32 - 141 |
| 13C12-123678-HxCDD | 70 | 28 - 130 |
| 13C12-123789-HxCDD | 69 | 28 - 130 |
| 13C12-1234678-HpCDD | 64 | 23 - 140 |
| 13C12-OCDD | 57 | 17 - 157 |
| 13C12-2378-TCDF | 51 | 24 - 169 |
| 13C12-12378-PeCDF | 55 | 24 - 185 |
| 13C12-23478-PeCDF | 56 | 21 - 178 |
| 13C12-123478-HxCDF | 64 | 26 - 152 |
| 13C12-123678-HxCDF | 65 | 26 - 123 |
| 13C12-234678-HxCDF | 65 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 65 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 53 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336141**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 08:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 04:33 | Laura M Krieger | 24.75 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:24 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:24 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 14:29 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 17:45 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/23/2014 21:50 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336141**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:50 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:27 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:27 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:27 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 11:54 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 11:00 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336142**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 38 | | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 36 | | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 41 | | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 42 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 40 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 47 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 38 | | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 20 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 41 | | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 55 | | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 45 | | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 40 | | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 25 | | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 40 | | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 38 | | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 57 | | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 44 | | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 36 | | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 24 | | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 37 | | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 38 | | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 38 | | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 31 | | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 64 | | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 41 | | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 62 | | 1.8 | 0.73 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 8.1 | | 1.0 | 0.2 | 23.54 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 180 | | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 140 | | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 180 | | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 6.1 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 9.6 | | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336142**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 21 | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 32 | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.8 | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,800 | 43.6 | 7.86 | 1 |
| 06944 | Antimony | 7440-36-0 | 37.1 | 4.36 | 0.807 | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.5 | 4.36 | 0.763 | 1 |
| 06946 | Barium | 7440-39-3 | 314 | 1.09 | 0.0360 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.22 | 1.09 | 0.0731 | 1 |
| 07914 | Boron | 7440-42-8 | 208 | 10.9 | 0.916 | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.58 | 1.09 | 0.0829 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,170 | 21.8 | 3.64 | 1 |
| 06951 | Chromium | 7440-47-3 | 47.5 | 3.27 | 0.174 | 1 |
| 06952 | Cobalt | 7440-48-4 | 55.7 | 1.09 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 46.7 | 2.18 | 0.316 | 1 |
| 01654 | Iron | 7439-89-6 | 23,500 | 43.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 21.9 | 3.27 | 0.545 | 1 |
| 01656 | Lithium | 7439-93-2 | 134 | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,260 | 10.9 | 1.82 | 1 |
| 06958 | Manganese | 7439-96-5 | 393 | 1.09 | 0.0905 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 203 | 2.18 | 0.185 | 1 |
| 06961 | Nickel | 7440-02-0 | 65.2 | 2.18 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 454 | 10.9 | 3.15 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,130 | 109 | 9.09 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,230 | 109 | 18.2 | 1 |
| 06969 | Tin | 7440-31-5 | 381 | 10.9 | 0.240 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,510 | 1.09 | 0.185 | 1 |
| 06971 | Vanadium | 7440-62-2 | 97.2 | 1.09 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 107 | 4.36 | 0.218 | 1 |
| 10146 | Zirconium | 7440-67-7 | 107 | 5.45 | 0.916 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.62 | 0.436 | 0.109 | 2 |
| 06142 | Silver | 7440-22-4 | 12.3 | 0.218 | 0.0284 | 2 |
| 06144 | Strontium | 7440-24-6 | 38.1 | 0.436 | 0.0741 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.745 | 0.218 | 0.0327 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.192 | 0.0175 | 0.0105 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 9.2 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336142**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.3 | | 1.07 | 0.0817 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 104 | | 5.34 | 0.0709 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 102 | B | 5.34 | 0.0556 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 105 | B | 5.34 | 0.0577 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 103 | B | 5.34 | 0.0536 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 103 | B | 5.34 | 0.0487 | 1 |
| 11031 | OCDD | 3268-87-9 | 215 | B | 10.7 | 0.0480 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.2 | | 1.07 | 0.0803 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 104 | B | 5.34 | 0.0444 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 104 | B | 5.34 | 0.0420 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 106 | B | 5.34 | 0.0538 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 107 | B | 5.34 | 0.0518 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 108 | B | 5.34 | 0.0585 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 107 | B | 5.34 | 0.0536 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 105 | B | 5.34 | 0.0416 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 107 | B | 5.34 | 0.0524 | 1 |
| 11031 | OCDF | 39001-02-0 | 206 | B | 10.7 | 0.0517 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 57 | 25 - 164 |
| 13C12-12378-PeCDD | 59 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 72 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 57 | 24 - 185 |
| 13C12-23478-PeCDF | 58 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 69 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 72 | 28 - 143 |
| 13C12-1234789-HpCDF | 66 | 26 - 138 |
| 13C12-OCDF | 62 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336142**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 08:48 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 05:10 | Laura M Krieger | 23.54 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:24 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:25 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 14:48 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 18:49 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/23/2014 22:46 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336142**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:54 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:29 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:29 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:29 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 11:56 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 11:02 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336143**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,200 | | 43.6 | 7.86 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.36 | U | 4.36 | 0.807 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.58 | | 4.36 | 0.763 | 1 |
| 06946 | Barium | 7440-39-3 | 99.9 | | 1.09 | 0.0360 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.713 | J | 1.09 | 0.0731 | 1 |
| 07914 | Boron | 7440-42-8 | 1.43 | J | 10.9 | 0.916 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.09 | U | 1.09 | 0.0829 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,470 | | 21.8 | 3.64 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.3 | | 3.27 | 0.174 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.32 | | 1.09 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 17.5 | | 2.18 | 0.316 | 1 |
| 01654 | Iron | 7439-89-6 | 22,200 | | 43.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 6.09 | | 3.27 | 0.545 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.8 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,690 | | 10.9 | 1.82 | 1 |
| 06958 | Manganese | 7439-96-5 | 311 | | 1.09 | 0.0905 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.32 | | 2.18 | 0.185 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.0 | | 2.18 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 322 | | 10.9 | 3.15 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,690 | | 109 | 9.09 | 1 |
| 01667 | Sodium | 7440-23-5 | 175 | | 109 | 18.2 | 1 |
| 06969 | Tin | 7440-31-5 | 3.17 | J | 10.9 | 0.240 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 1.09 | 0.185 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.3 | | 1.09 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.5 | | 4.36 | 0.218 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.73 | J | 5.45 | 0.916 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.436 | U | 0.436 | 0.109 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0408 | J | 0.218 | 0.0284 | 2 |
| 06144 | Strontium | 7440-24-6 | 25.1 | | 0.436 | 0.0741 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.278 | | 0.218 | 0.0327 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0179 | U | 0.0179 | 0.0107 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.61 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 9.2 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 9.0 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336143**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83940 SDG#: PH159-02DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 13:46 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:24 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:24 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:24 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 11:52 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 10:58 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1139-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336144**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11394 SDG#: PH159-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.67 | J | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.7 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.0 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.3 | J | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.4 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 6.2 | | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 2.2 | | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 3.4 | | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.1 | | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 8.3 | | 1.8 | 0.73 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 24.13 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-1139-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336144**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11394 SDG#: PH159-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,000 | | 42.9 | 7.73 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.29 | U | 4.29 | 0.794 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.48 | | 4.29 | 0.751 | 1 |
| 06946 | Barium | 7440-39-3 | 102 | | 1.07 | 0.0354 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.717 | J | 1.07 | 0.0719 | 1 |
| 07914 | Boron | 7440-42-8 | 1.30 | J | 10.7 | 0.901 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.07 | U | 1.07 | 0.0815 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,650 | | 21.5 | 3.58 | 1 |
| 06951 | Chromium | 7440-47-3 | 23.6 | | 3.22 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.77 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 17.6 | | 2.15 | 0.311 | 1 |
| 01654 | Iron | 7439-89-6 | 23,200 | | 42.9 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 6.30 | | 3.22 | 0.536 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.2 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,850 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 329 | | 1.07 | 0.0890 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.65 | J | 2.15 | 0.182 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.2 | | 2.15 | 0.139 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 351 | | 10.7 | 3.10 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,710 | | 107 | 8.95 | 1 |
| 01667 | Sodium | 7440-23-5 | 171 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.22 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,110 | | 1.07 | 0.182 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.2 | | 1.07 | 0.139 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.2 | | 4.29 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.96 | J | 5.36 | 0.901 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.124 | J | 0.429 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0306 | J | 0.215 | 0.0279 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.6 | | 0.429 | 0.0729 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.266 | | 0.215 | 0.0322 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0173 | U | 0.0173 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.77 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.6 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1139-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336144**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11394 SDG#: PH159-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1139-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336144**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11394 SDG#: PH159-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.05 | U | 1.05 | 0.0757 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0499 | J | 5.23 | 0.0405 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0806 | JBQ | 5.23 | 0.0299 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.260 | JBQ | 5.23 | 0.0322 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.424 | JBQ | 5.23 | 0.0295 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.397 | JB | 5.23 | 0.0231 | 1 |
| 11031 | OCDD | 3268-87-9 | 3.41 | JB | 10.5 | 0.0292 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0983 | JQ | 1.05 | 0.0613 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.153 | JBQ | 5.23 | 0.0283 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.336 | JB | 5.23 | 0.0255 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.163 | JB | 5.23 | 0.0273 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.152 | JB | 5.23 | 0.0272 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.399 | JB | 5.23 | 0.0261 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.158 | JB | 5.23 | 0.0257 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.171 | JB | 5.23 | 0.0138 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0790 | JBQ | 5.23 | 0.0180 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.373 | JBQ | 10.5 | 0.0376 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.245 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 60 | 25 - 164 |
| 13C12-12378-PeCDD | 61 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 72 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 69 | 17 - 157 |
| 13C12-2378-TCDF | 58 | 24 - 169 |
| 13C12-12378-PeCDF | 60 | 24 - 185 |
| 13C12-23478-PeCDF | 60 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 67 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 73 | 29 - 147 |
| 13C12-1234678-HpCDF | 75 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 62 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1139-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336144**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11394 SDG#: PH159-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1139-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336144**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11394 SDG#: PH159-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 09:51 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 00:46 | Laura M Krieger | 24.13 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:25 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:26 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 15:06 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 17:24 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/23/2014 23:43 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-1139-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336144**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 09:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11394 SDG#: PH159-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:06 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:36 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:36 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:36 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 12:04 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 11:04 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336145**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83990 SDG#: PH159-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.6 | J | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 9.8 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 6.3 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 10 | | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.7 | J | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.5 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 5.5 | | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 12 | | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 22 | | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 23 | | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | J | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.5 | | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 29 | | 1.8 | 0.73 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 24.41 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 31 | | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336145**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83990 SDG#: PH159-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.2 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,200 | | 43.2 | 7.78 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.32 | U | 4.32 | 0.799 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.74 | | 4.32 | 0.756 | 1 |
| 06946 | Barium | 7440-39-3 | 98.2 | | 1.08 | 0.0356 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.730 | J | 1.08 | 0.0723 | 1 |
| 07914 | Boron | 7440-42-8 | 1.03 | J | 10.8 | 0.907 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.08 | U | 1.08 | 0.0821 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,260 | | 21.6 | 3.61 | 1 |
| 06951 | Chromium | 7440-47-3 | 36.5 | | 3.24 | 0.173 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.78 | | 1.08 | 0.107 | 1 |
| 06953 | Copper | 7440-50-8 | 18.7 | | 2.16 | 0.313 | 1 |
| 01654 | Iron | 7439-89-6 | 24,200 | | 43.2 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 7.03 | | 3.24 | 0.540 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.7 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,320 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 324 | | 1.08 | 0.0896 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.542 | J | 2.16 | 0.184 | 1 |
| 06961 | Nickel | 7440-02-0 | 25.1 | | 2.16 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 404 | | 10.8 | 3.12 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,900 | | 108 | 9.00 | 1 |
| 01667 | Sodium | 7440-23-5 | 195 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.23 | J | 10.8 | 0.238 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,170 | | 1.08 | 0.184 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.3 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 63.8 | | 4.32 | 0.216 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.22 | J | 5.40 | 0.907 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.122 | J | 0.432 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0466 | J | 0.216 | 0.0281 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.3 | | 0.432 | 0.0734 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.254 | | 0.216 | 0.0324 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0195 | | 0.0178 | 0.0107 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.88 | | 0.0100 | 0.0100 | 1 |

The pH was measured in water at 19.7 C.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336145**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83990 SDG#: PH159-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.2 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336145**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83990 SDG#: PH159-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0640 JQ | 1.03 | 0.0590 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0711 JQ | 5.13 | 0.0370 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0509 JBQ | 5.13 | 0.0280 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.316 JBQ | 5.13 | 0.0286 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.385 JB | 5.13 | 0.0274 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 4.26 JB | 5.13 | 0.0265 | 1 |
| 11031 | OCDD | 3268-87-9 | 34.0 B | 10.3 | 0.0278 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 U | 1.03 | 0.0501 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0974 JBQ | 5.13 | 0.0231 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.129 JB | 5.13 | 0.0216 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0887 JBQ | 5.13 | 0.0229 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.107 JBQ | 5.13 | 0.0220 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.277 JB | 5.13 | 0.0226 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0936 JBQ | 5.13 | 0.0207 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.24 JB | 5.13 | 0.0128 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.107 JBQ | 5.13 | 0.0159 | 1 |
| 11031 | OCDF | 39001-02-0 | 6.51 JB | 10.3 | 0.0285 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.172 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 67 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 75 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 83 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336145**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83990 SDG#: PH159-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336145**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83990 SDG#: PH159-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 10:22 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 01:24 | Laura M Krieger | 24.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:27 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:27 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 15:25 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 19:11 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/24/2014 00:40 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336145**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:15 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83990 SDG#: PH159-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:17 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:43 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:43 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:43 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 12:06 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 11:06 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-15.5-16.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336146**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83915 SDG#: PH159-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 29 | | 1.9 | 0.77 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.39 | 1 |
| 12969 | Anthracene | 120-12-7 | 130 | | 1.9 | 0.39 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 110 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 48 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 83 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 31 | | 20 | 3.9 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 11 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 43 | | 1.9 | 0.77 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 100 | | 1.9 | 0.39 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 4.3 | | 1.9 | 0.77 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 470 | | 19 | 7.7 | 10 |
| 12969 | Fluorene | 86-73-7 | 19 | | 1.9 | 0.77 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12 | | 1.9 | 0.77 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.87 | J | 1.9 | 0.77 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.2 | J | 1.9 | 0.77 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.1 | J | 1.9 | 0.77 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 21 | U | 21 | 7.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 570 | | 19 | 7.7 | 10 |
| 12969 | Pyrene | 129-00-0 | 550 | | 19 | 7.7 | 10 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 26.04 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 38 | U | 38 | 12 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 20 | U | 20 | 5.9 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 20 | U | 20 | 4.8 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 20 | U | 20 | 4.8 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 20 | U | 20 | 5.1 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 20 | U | 20 | 4.5 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 20 | U | 20 | 3.8 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-15.5-16.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336146**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83915 SDG#: PH159-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 4.6 | J | 5.8 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 7.4 | J | 12 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.5 | J | 5.8 | 2.3 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,800 | | 44.7 | 8.05 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.47 | U | 4.47 | 0.826 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.37 | J | 4.47 | 0.782 | 1 |
| 06946 | Barium | 7440-39-3 | 84.2 | | 1.12 | 0.0369 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.462 | J | 1.12 | 0.0748 | 1 |
| 07914 | Boron | 7440-42-8 | 1.98 | J | 11.2 | 0.938 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.12 | U | 1.12 | 0.0849 | 1 |
| 01650 | Calcium | 7440-70-2 | 17,000 | | 22.3 | 3.73 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.5 | | 3.35 | 0.179 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.28 | | 1.12 | 0.111 | 1 |
| 06953 | Copper | 7440-50-8 | 16.1 | | 2.23 | 0.324 | 1 |
| 01654 | Iron | 7439-89-6 | 19,500 | | 44.7 | 4.04 | 1 |
| 06955 | Lead | 7439-92-1 | 4.50 | | 3.35 | 0.558 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.6 | | 4.5 | 0.38 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,200 | | 11.2 | 1.87 | 1 |
| 06958 | Manganese | 7439-96-5 | 265 | | 1.12 | 0.0927 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.271 | J | 2.23 | 0.190 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.1 | | 2.23 | 0.145 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 463 | | 11.2 | 3.23 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,700 | | 112 | 9.31 | 1 |
| 01667 | Sodium | 7440-23-5 | 463 | | 112 | 18.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.99 | J | 11.2 | 0.246 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,110 | | 1.12 | 0.190 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.2 | | 1.12 | 0.145 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.8 | | 4.47 | 0.223 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.55 | J | 5.58 | 0.938 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.447 | U | 0.447 | 0.112 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0323 | J | 0.223 | 0.0290 | 2 |
| 06144 | Strontium | 7440-24-6 | 70.4 | | 0.447 | 0.0759 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.188 | J | 0.223 | 0.0335 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0193 | U | 0.0193 | 0.0116 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 11.9 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 19.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 13.9 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-15.5-16.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336146**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83915 SDG#: PH159-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-839-SA5B-SB-15.5-16.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336146**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83915 SDG#: PH159-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.13 | U | 1.13 | 0.0701 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.65 | U | 5.65 | 0.0414 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.65 | U | 5.65 | 0.0283 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.65 | U | 5.65 | 0.0304 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0405 | JB | 5.65 | 0.0272 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.733 | JB | 5.65 | 0.0270 | 1 |
| 11031 | OCDD | 3268-87-9 | 3.21 | JB | 11.3 | 0.0315 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.13 | U | 1.13 | 0.0543 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0717 | JB | 5.65 | 0.0236 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.118 | JBQ | 5.65 | 0.0227 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.121 | JB | 5.65 | 0.0234 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0755 | JBQ | 5.65 | 0.0226 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0988 | JB | 5.65 | 0.0231 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0712 | JBQ | 5.65 | 0.0230 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.203 | JB | 5.65 | 0.0101 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.111 | JB | 5.65 | 0.0137 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.332 | JB | 11.3 | 0.0345 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0398 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 59 | 25 - 164 |
| 13C12-12378-PeCDD | 58 | 25 - 181 |
| 13C12-123478-HxCDD | 69 | 32 - 141 |
| 13C12-123678-HxCDD | 67 | 28 - 130 |
| 13C12-123789-HxCDD | 69 | 28 - 130 |
| 13C12-1234678-HpCDD | 69 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 57 | 24 - 185 |
| 13C12-23478-PeCDF | 57 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 70 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 74 | 29 - 147 |
| 13C12-1234678-HpCDF | 76 | 28 - 143 |
| 13C12-1234789-HpCDF | 66 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-15.5-16.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336146**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83915 SDG#: PH159-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-15.5-16.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336146**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83915 SDG#: PH159-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 10:53 | Mark A Clark | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/30/2014 10:22 | Mark A Clark | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 02:01 | Laura M Krieger | 26.04 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:28 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:28 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 15:43 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 16:41 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/24/2014 01:36 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-839-SA5B-SB-15.5-16.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336146**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 10:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83915 SDG#: PH159-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:21 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:46 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:46 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:46 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 12:08 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 11:08 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336147**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84300 SDG#: PH159-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.55 | J | 1.9 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.4 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | J | 1.9 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.7 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.5 | J | 1.9 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.6 | | 1.9 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.4 | | 1.9 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | J | 1.9 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 5.4 | | 1.9 | 0.74 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 370 | U | 370 | 110 | 10 |
| 13099 | Aroclor 5460 | 11126-42-4 | 37 | U | 37 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.7 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 6.7 | J | 19 | 3.7 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 7.7 | J | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 190 | U | 190 | 37 | 10 |
| 13099 | PCB-1268 | 11100-14-4 | 190 | U | 190 | 37 | 10 |
| | Project defined QC acceptance limits are not met. All QC is compliant with the laboratory statistically generated limits. Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.0 | | 5.6 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | | 11 | 4.5 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-843-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336147**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84300 SDG#: PH159-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,200 | | 43.3 | 7.80 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.33 | U | 4.33 | 0.801 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.07 | | 4.33 | 0.758 | 1 |
| 06946 | Barium | 7440-39-3 | 98.9 | | 1.08 | 0.0357 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.890 | J | 1.08 | 0.0725 | 1 |
| 07914 | Boron | 7440-42-8 | 10.8 | U | 10.8 | 0.909 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.08 | U | 1.08 | 0.0823 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,760 | | 21.6 | 3.62 | 1 |
| 06951 | Chromium | 7440-47-3 | 23.1 | | 3.25 | 0.173 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.93 | | 1.08 | 0.107 | 1 |
| 06953 | Copper | 7440-50-8 | 21.6 | | 2.16 | 0.314 | 1 |
| 01654 | Iron | 7439-89-6 | 29,200 | | 43.3 | 3.92 | 1 |
| 06955 | Lead | 7439-92-1 | 8.47 | | 3.25 | 0.541 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.4 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,040 | | 10.8 | 1.81 | 1 |
| 06958 | Manganese | 7439-96-5 | 373 | | 1.08 | 0.0898 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.485 | J | 2.16 | 0.184 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.2 | | 2.16 | 0.141 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 522 | | 10.8 | 3.13 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,580 | | 108 | 9.03 | 1 |
| 01667 | Sodium | 7440-23-5 | 325 | | 108 | 18.1 | 1 |
| 06969 | Tin | 7440-31-5 | 3.28 | J | 10.8 | 0.238 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 1.08 | 0.184 | 1 |
| 06971 | Vanadium | 7440-62-2 | 44.3 | | 1.08 | 0.141 | 1 |
| 06972 | Zinc | 7440-66-6 | 72.1 | | 4.33 | 0.216 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.78 | J | 5.41 | 0.909 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.184 | J | 0.433 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0418 | J | 0.216 | 0.0281 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.5 | | 0.433 | 0.0736 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.279 | | 0.216 | 0.0325 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0239 | | 0.0177 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 19 C. | n.a. | 8.63 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.3 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336147**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84300 SDG#: PH159-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336147**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84300 SDG#: PH159-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0867 | JQ | 1.10 | 0.0691 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.242 | JQ | 5.49 | 0.0490 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0643 | JBQ | 5.49 | 0.0303 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.665 | JB | 5.49 | 0.0313 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.01 | JB | 5.49 | 0.0291 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.08 | JB | 5.49 | 0.0274 | 1 |
| 11031 | OCDD | 3268-87-9 | 15.0 | B | 11.0 | 0.0319 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.134 | JQ | 1.10 | 0.0639 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.332 | JBQ | 5.49 | 0.0272 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.138 | JBQ | 5.49 | 0.0260 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.177 | JB | 5.49 | 0.0246 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.203 | JBQ | 5.49 | 0.0233 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.717 | JBQ | 5.49 | 0.0284 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.128 | JBQ | 5.49 | 0.0239 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.449 | JB | 5.49 | 0.0112 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.114 | JB | 5.49 | 0.0158 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.932 | JB | 11.0 | 0.0344 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.217 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 59 | 25 - 164 |
| 13C12-12378-PeCDD | 62 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 73 | 28 - 130 |
| 13C12-123789-HxCDD | 74 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 69 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 60 | 24 - 185 |
| 13C12-23478-PeCDF | 60 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 81 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336147**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84300 SDG#: PH159-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336147**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84300 SDG#: PH159-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 11:24 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 16:02 | Jessica L Miller | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/24/2014 03:03 | Jessica L Miller | 10 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 18:07 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/24/2014 02:33 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:25 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:48 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:48 | Deborah A Krady | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336147**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:10 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84300 SDG#: PH159-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:48 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 12:10 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140160638002 | 01/21/2014 11:10 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140160638002 | 01/17/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336148**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84340 SDG#: PH159-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.95 | J | 1.9 | 0.76 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.1 | J | 1.9 | 0.76 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.1 | J | 1.9 | 0.76 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.91 | J | 1.9 | 0.76 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.9 | 0.76 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.9 | 0.76 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 22.01 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 38 | U | 38 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 38 | U | 38 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 38 | U | 38 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.8 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.7 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.7 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 8.6 | J | 19 | 3.8 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 6.5 | J | 19 | 5.0 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.4 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.8 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336148**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84340 SDG#: PH159-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 4.8 | J | 5.7 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | J | 11 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,100 | | 45.1 | 8.12 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.51 | U | 4.51 | 0.834 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.22 | | 4.51 | 0.788 | 1 |
| 06946 | Barium | 7440-39-3 | 107 | | 1.13 | 0.0372 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.01 | J | 1.13 | 0.0755 | 1 |
| 07914 | Boron | 7440-42-8 | 3.71 | J | 11.3 | 0.946 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.13 | U | 1.13 | 0.0856 | 1 |
| 01650 | Calcium | 7440-70-2 | 11,800 | | 22.5 | 3.76 | 1 |
| 06951 | Chromium | 7440-47-3 | 28.9 | | 3.38 | 0.180 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.02 | | 1.13 | 0.112 | 1 |
| 06953 | Copper | 7440-50-8 | 23.8 | | 2.25 | 0.327 | 1 |
| 01654 | Iron | 7439-89-6 | 29,800 | | 45.1 | 4.08 | 1 |
| 06955 | Lead | 7439-92-1 | 8.79 | | 3.38 | 0.563 | 1 |
| 01656 | Lithium | 7439-93-2 | 31.4 | | 4.5 | 0.38 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,790 | | 11.3 | 1.88 | 1 |
| 06958 | Manganese | 7439-96-5 | 325 | | 1.13 | 0.0935 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.349 | J | 2.25 | 0.191 | 1 |
| 06961 | Nickel | 7440-02-0 | 18.4 | | 2.25 | 0.146 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 199 | | 11.3 | 3.26 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,490 | | 113 | 9.39 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,890 | | 113 | 18.8 | 1 |
| 06969 | Tin | 7440-31-5 | 3.37 | J | 11.3 | 0.248 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,240 | | 1.13 | 0.191 | 1 |
| 06971 | Vanadium | 7440-62-2 | 50.1 | | 1.13 | 0.146 | 1 |
| 06972 | Zinc | 7440-66-6 | 65.1 | | 4.51 | 0.225 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.02 | J | 5.63 | 0.946 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.130 | J | 0.451 | 0.113 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0956 | J | 0.225 | 0.0293 | 2 |
| 06144 | Strontium | 7440-24-6 | 68.8 | | 0.451 | 0.0766 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.320 | | 0.225 | 0.0338 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0129 | J | 0.0178 | 0.0107 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 18 C. | n.a. | 9.00 | | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.1 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336148**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84340 SDG#: PH159-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-843-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336148**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84340 SDG#: PH159-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.137 | JQ | 1.13 | 0.0613 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.311 | J | 5.63 | 0.0386 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.146 | JBQ | 5.63 | 0.0286 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.275 | JB | 5.63 | 0.0309 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.366 | JBQ | 5.63 | 0.0279 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.18 | JB | 5.63 | 0.0244 | 1 |
| 11031 | OCDD | 3268-87-9 | 10.6 | JB | 11.3 | 0.0255 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.149 | JQ | 1.13 | 0.0467 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.444 | JBQ | 5.63 | 0.0226 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.316 | JB | 5.63 | 0.0214 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.222 | JB | 5.63 | 0.0220 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.247 | JBQ | 5.63 | 0.0213 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.377 | JB | 5.63 | 0.0230 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.138 | JBQ | 5.63 | 0.0207 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.253 | JBQ | 5.63 | 0.0123 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.131 | JB | 5.63 | 0.0163 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.709 | JB | 11.3 | 0.0340 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.510 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 73 | 17 - 157 |
| 13C12-2378-TCDF | 61 | 24 - 169 |
| 13C12-12378-PeCDF | 63 | 24 - 185 |
| 13C12-23478-PeCDF | 63 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 83 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 70 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336148**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84340 SDG#: PH159-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336148**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84340 SDG#: PH159-07

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 11:56 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 02:39 | Laura M Krieger | 22.01 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:29 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:29 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 16:20 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 18:28 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/24/2014 06:27 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336148**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:30 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84340 SDG#: PH159-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:34 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:51 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:51 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:51 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 12:11 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 11:14 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336149**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:40 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84370 SDG#: PH159-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.4 | J | 1.9 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | J | 1.9 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.2 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.74 | J | 1.9 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.3 | J | 1.9 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.3 | | 1.9 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.2 | | 1.9 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | J | 1.9 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.9 | | 1.9 | 0.74 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 23.72 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 37 | U | 37 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.7 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 14 | J | 19 | 3.7 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 11 | J | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.7 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-843-SA5B-SB-7.0-8.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336149**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:40 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84370 SDG#: PH159-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | J | 5.6 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 17 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,400 | | 44.1 | 7.94 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.41 | U | 4.41 | 0.815 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.42 | | 4.41 | 0.771 | 1 |
| 06946 | Barium | 7440-39-3 | 80.4 | | 1.10 | 0.0363 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.765 | J | 1.10 | 0.0738 | 1 |
| 07914 | Boron | 7440-42-8 | 1.10 | J | 11.0 | 0.925 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0837 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,510 | | 22.0 | 3.68 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.9 | | 3.30 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.53 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 18.2 | | 2.20 | 0.319 | 1 |
| 01654 | Iron | 7439-89-6 | 24,100 | | 44.1 | 3.99 | 1 |
| 06955 | Lead | 7439-92-1 | 6.99 | | 3.30 | 0.551 | 1 |
| 01656 | Lithium | 7439-93-2 | 30.4 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,920 | | 11.0 | 1.84 | 1 |
| 06958 | Manganese | 7439-96-5 | 334 | | 1.10 | 0.0914 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.243 | J | 2.20 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.0 | | 2.20 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 274 | | 11.0 | 3.18 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,010 | | 110 | 9.19 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,130 | | 110 | 18.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.19 | J | 11.0 | 0.242 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,070 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.7 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 58.1 | | 4.41 | 0.220 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.43 | J | 5.51 | 0.925 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.441 | U | 0.441 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0573 | J | 0.220 | 0.0286 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.0 | | 0.441 | 0.0749 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.243 | | 0.220 | 0.0330 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0180 | | 0.0175 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.78 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 18.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.1 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336149**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:40 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84370 SDG#: PH159-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-843-SA5B-SB-7.0-8.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7336149**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:40 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84370 SDG#: PH159-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.11 | U | 1.11 | 0.0546 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.105 | JQ | 5.56 | 0.0387 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0693 | JBQ | 5.56 | 0.0302 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.187 | JB | 5.56 | 0.0313 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.194 | JBQ | 5.56 | 0.0299 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.30 | JB | 5.56 | 0.0291 | 1 |
| 11031 | OCDD | 3268-87-9 | 36.6 | B | 11.1 | 0.0240 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0741 | JQ | 1.11 | 0.0457 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.242 | JB | 5.56 | 0.0212 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.185 | JBQ | 5.56 | 0.0208 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.161 | JB | 5.56 | 0.0245 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.134 | JB | 5.56 | 0.0238 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.160 | JB | 5.56 | 0.0255 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.130 | JB | 5.56 | 0.0235 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.631 | JB | 5.56 | 0.0141 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.136 | JBQ | 5.56 | 0.0175 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.46 | JB | 11.1 | 0.0324 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.135 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 69 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 68 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 82 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 72 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336149**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:40 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84370 SDG#: PH159-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336149**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:40 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84370 SDG#: PH159-08

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14022SLC026 | 01/24/2014 12:28 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14022SLC026 | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14016B16A | 01/18/2014 03:17 | Laura M Krieger | 23.72 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201401533622 | 01/15/2014 19:30 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201401533622 | 01/15/2014 19:30 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 140210005A | 01/23/2014 16:38 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 140210005A | 01/22/2014 09:00 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140220009A | 01/23/2014 19:32 | Heather E Williams | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 140220009A | 01/23/2014 02:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021002 | 01/24/2014 14:58 | Nelson H Risser | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B | 1 | 14021002 | 01/21/2014 09:30 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-843-SA5B-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7336149**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 13:40 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84370 SDG#: PH159-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 140200637001 | 01/21/2014 14:38 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 140200637001B | 01/24/2014 06:53 | Deborah A Krady | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:53 | Deborah A Krady | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 06:53 | Deborah A Krady | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 140200637001A | 01/24/2014 12:13 | Deborah A Krady | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 140150638001 | 01/17/2014 11:16 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 140200637001 | 01/20/2014 22:10 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 140150638001 | 01/16/2014 12:25 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14016039401B | 01/16/2014 09:30 | Yolunder Y Bunch | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14022162401B | 01/22/2014 22:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-011414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7336150**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 08:00 by KL

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB114 SDG#: PH159-09TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14016A94A | 01/17/2014 14:41 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14016A94A | 01/17/2014 14:41 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-011414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7336151**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 15:00 by PH

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB114 SDG#: PH159-10EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.17 | J | 1.1 | 0.053 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.44 | J | 1.1 | 0.053 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.090 | J | 1.1 | 0.053 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 | U | 0.053 | 0.011 | 1 |

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/l | | ug/l | ug/l | |
| 06386 | Perchlorate in Water LC/MS/MS | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.40 | U | 0.40 | 0.088 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.40 | U | 0.40 | 0.16 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.40 | U | 0.40 | 0.080 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.40 | U | 0.40 | 0.12 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.40 | U | 0.40 | 0.16 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.40 | U | 0.40 | 0.13 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-011414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7336151**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 15:00 by PH

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB114 SDG#: PH159-10EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.49 U | 0.49 | 0.098 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.00036 J | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.4 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-011414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7336151**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 15:00 by PH

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB114 SDG#: PH159-10EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 2.01 | U | 2.01 | 1.03 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 10.1 | U | 10.1 | 0.660 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.537 | J | 10.1 | 0.358 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 0.852 | JBQ | 10.1 | 0.379 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 10.1 | U | 10.1 | 0.377 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.524 | JB | 10.1 | 0.456 | 1 |
| 10915 | OCDD | 3268-87-9 | 0.900 | JB | 20.1 | 0.380 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 2.01 | U | 2.01 | 0.514 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.459 | JBQ | 10.1 | 0.299 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 10.1 | U | 10.1 | 0.271 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.302 | JBQ | 10.1 | 0.233 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.501 | JBQ | 10.1 | 0.238 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 10.1 | U | 10.1 | 0.281 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.404 | J | 10.1 | 0.242 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.280 | JBQ | 10.1 | 0.162 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.352 | JBQ | 10.1 | 0.204 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.27 | JBQ | 20.1 | 0.536 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0995 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 52 | 25 - 164 |
| 13C12-12378-PeCDD | 57 | 25 - 181 |
| 13C12-123478-HxCDD | 70 | 32 - 141 |
| 13C12-123678-HxCDD | 72 | 28 - 130 |
| 13C12-123789-HxCDD | 69 | 28 - 130 |
| 13C12-1234678-HpCDD | 70 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 65 | 24 - 185 |
| 13C12-23478-PeCDF | 65 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 80 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-011414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7336151**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 15:00 by PH

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB114 SDG#: PH159-10EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-011414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7336151**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 15:00 by PH

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB114 SDG#: PH159-10EB*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14020WAH026 | 01/24/2014 20:56 | Catherine E Bachman | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14020WAH026 | 01/21/2014 10:00 | Anna E Stager | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14016A94A | 01/17/2014 15:07 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14016A94A | 01/17/2014 15:07 | Laura M Krieger | 1 |
| 06386 | Perchlorate in Water LC/MS/MS | SW-846 6850 1/2007 | 1 | 140210001A | 01/23/2014 13:19 | Richard A Shober | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 140200023A | 01/22/2014 15:45 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 140200023A | 01/21/2014 06:15 | Roman Kuropatkin | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 140200007A | 01/21/2014 16:18 | Heather E Williams | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 140200007A | 01/20/2014 12:00 | Kelli M Barto | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B | 1 | 14021001 | 01/22/2014 23:50 | Nelson H Risser | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B | 1 | 14021001 | 01/21/2014 08:20 | Robert Brown | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-011414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7336151**
**LL Group # 1446014**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 01/14/2014 15:00 by PH

Submitted: 01/15/2014 10:00
Reported: 01/31/2014 08:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB114 SDG#: PH159-10EB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07072 | Zinc | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 140210635002 | 01/24/2014 03:16 | Tara L Snyder | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 140210639002B | 01/24/2014 11:32 | Deborah A Krady | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 140210639002A | 01/24/2014 11:32 | Deborah A Krady | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 140210639002A | 01/24/2014 11:32 | Deborah A Krady | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 140210639002A | 01/24/2014 11:32 | Deborah A Krady | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 140155713002 | 01/16/2014 12:23 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 140210635002 | 01/23/2014 12:04 | James L Mertz | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 140210639002 | 01/23/2014 12:10 | James L Mertz | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 140155713002 | 01/16/2014 08:00 | John W Yanzuk II | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 140160021101A | 01/16/2014 15:48 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14020WAH026 | Sample number(s): 7336151 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 100 | 77-118 | 0 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 105 | 80-123 | 0 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 107 | 78-123 | 1 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 105 | 73-127 | 5 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 107 | 72-120 | 2 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 114 | 115 | 79-136 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 99 | 70-130 | 0 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 109 | 64-130 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 110 | 73-131 | 3 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 102 | 104 | 40-138 | 2 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 106 | 115 | 64-141 | 8 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 107 | 76-125 | 3 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 111 | 58-131 | 1 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 110 | 111 | 64-128 | 1 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 107 | 108 | 23-139 | 1 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.18 | J | 1.0 | 0.050 | ug/l | 114 | 113 | 70-143 | 0 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 108 | 79-124 | 0 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 104 | 74-115 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 108 | 62-130 | 0 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 109 | 80-126 | 0 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 109 | 81-124 | 1 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 106 | 106 | 75-120 | 0 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 77 | 78 | 36-120 | 1 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 103 | 107 | 57-145 | 3 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 105 | 104 | 75-120 | 1 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 115 | 109 | 71-130 | 6 | 30 |
| Batch number: 14022SLC026 | Sample number(s): 7336139-7336142,7336144-7336149 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 77-116 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 80-116 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 90 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 128* | | 77-123 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 78-125 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-124 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 77-130 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 102 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 132* | | 79-121 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 81-126 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 77-124 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 84 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 123 | | 76-131 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 72-110 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 79-112 | | |
| Batch number: 14016A94A | Sample number(s): 7336150-7336151 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 113 | 112 | 75-135 | 1 | 30 |
| Batch number: 14016B16A | Sample number(s): 7336140-7336142,7336144-7336146,7336148-7336149 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 82 | | 67-119 | | |
| Batch number: 140210001A | Sample number(s): 7336151 | | | | | | | | | |
| Perchlorate in Water LC/MS/MS | 1.0 | U | 1.0 | 0.20 | ug/l | 87 | | 85-115 | | |
| Batch number: 140200023A | Sample number(s): 7336151 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 63 | 66 | 35-84 | 4 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 78 | 82 | 67-117 | 6 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 79 | 85 | 67-128 | 7 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 140210005A | Sample number(s): 7336139-7336142,7336144-7336149 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 88 | 86 | 36-106 | 2 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 96 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 99 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 140200007A | Sample number(s): 7336151 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 92 | 94 | 67-109 | 2 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 95 | 98 | 71-119 | 3 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 95 | 98 | 75-117 | 4 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 81 | 83 | 44-134 | 3 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 76 | 76 | 55-86 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 140220009A | Sample number(s): 7336139-7336142,7336144-7336149 | | | | | | | | |
| EFH (C12-C14) | 5.0 U | 5.0 | 2.0 | mg/kg | 96 | | 76-115 | | |
| EFH (C15-C20) | 5.0 U | 5.0 | 2.0 | mg/kg | 98 | | 78-127 | | |
| EFH (C21-C30) | 5.0 U | 5.0 | 2.0 | mg/kg | 99 | | 77-127 | | |
| EFH (C30-C40) | 10 U | 10. | 4.0 | mg/kg | 91 | | 44-134 | | |
| EFH (C8-C11) | 5.0 U | 5.0 | 2.0 | mg/kg | 80 | | 60-115 | | |
| Batch number: 140150638001 | Sample number(s): 7336140-7336146,7336148-7336149 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 91 | | 85-120 | | |
| Batch number: 140155713002 | Sample number(s): 7336151 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00006 0 | mg/l | 97 | 96 | 90-115 | 1 | 20 |
| Batch number: 140160638002 | Sample number(s): 7336139,7336147 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 100 | | 85-120 | | |
| Batch number: 140200637001 | Sample number(s): 7336139-7336149 | | | | | | | | |
| Aluminum | 40.0 U | 40.0 | 7.21 | mg/kg | 101 | | 80-120 | | |
| Antimony | 4.00 U | 4.00 | 0.740 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 U | 1.00 | 0.0330 | mg/kg | 100 | | 80-120 | | |
| Beryllium | 1.00 U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 U | 10.0 | 0.840 | mg/kg | 98 | | 80-120 | | |
| Cadmium | 1.00 U | 1.00 | 0.0760 | mg/kg | 102 | | 80-120 | | |
| Calcium | 20.0 U | 20.0 | 3.34 | mg/kg | 98 | | 80-120 | | |
| Chromium | 3.00 U | 3.00 | 0.160 | mg/kg | 99 | | 80-120 | | |
| Cobalt | 1.00 U | 1.00 | 0.0990 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 U | 2.00 | 0.290 | mg/kg | 105 | | 80-120 | | |
| Iron | 40.0 U | 40.0 | 3.62 | mg/kg | 102 | | 80-120 | | |
| Lead | 3.00 U | 3.00 | 0.500 | mg/kg | 105 | | 80-120 | | |
| Lithium | 0.44 J | 4.0 | 0.34 | mg/kg | 100 | | 80-120 | | |
| Magnesium | 10.0 U | 10.0 | 1.67 | mg/kg | 98 | | 80-120 | | |
| Manganese | 1.00 U | 1.00 | 0.0830 | mg/kg | 102 | | 80-120 | | |
| Molybdenum | 2.00 U | 2.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Nickel | 2.00 U | 2.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 10.0 U | 10.0 | 2.89 | mg/kg | 102 | | 80-120 | | |
| Potassium | 100 U | 100. | 8.34 | mg/kg | 99 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 99 | | 80-120 | | |
| Tin | 1.72 J | 10.0 | 0.220 | mg/kg | 100 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Vanadium | 1.00 U | 1.00 | 0.130 | mg/kg | 103 | | 80-120 | | |
| Zinc | 1.24 J | 4.00 | 0.200 | mg/kg | 101 | | 80-120 | | |
| Zirconium | 5.00 U | 5.00 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Batch number: 140200637001A | Sample number(s): 7336139-7336149 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0260 | mg/kg | 117 | | 80-120 | | |
| Strontium | 0.400 U | 0.400 | 0.0680 | mg/kg | 111 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 103 | | 80-120 | | |
| Batch number: 140200637001B | Sample number(s): 7336139-7336149 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 118 | | 80-120 | | |
| Batch number: 140210635002 | Sample number(s): 7336151 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.400 U | 0.400 | 0.0828 | mg/l | 104 | 104 | 90-112 | 0 | 20 |
| Antimony | 0.0400 U | 0.0400 | 0.0053 | mg/l | 103 | 104 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 U | 0.0400 | 0.0068 | mg/l | 109 | 110 | 90-113 | 1 | 20 |
| Barium | 0.0100 U | 0.0100 | 0.00033 | mg/l | 107 | 106 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 U | 0.0100 | 0.00067 | mg/l | 101 | 101 | 90-111 | 0 | 20 |
| Boron | 0.100 U | 0.100 | 0.0084 | mg/l | 100 | 99 | 90-110 | 1 | 20 |
| Cadmium | 0.0100 U | 0.0100 | 0.00076 | mg/l | 104 | 105 | 90-112 | 1 | 20 |
| Calcium | 0.0510 J | 0.400 | 0.0334 | mg/l | 101 | 101 | 90-112 | 1 | 20 |
| Chromium | 0.0300 U | 0.0300 | 0.0016 | mg/l | 104 | 104 | 90-110 | 0 | 20 |
| Cobalt | 0.0100 U | 0.0100 | 0.0013 | mg/l | 106 | 107 | 90-110 | 1 | 20 |
| Copper | 0.0200 U | 0.0200 | 0.0027 | mg/l | 110 | 109 | 90-112 | 0 | 20 |
| Iron | 0.400 U | 0.400 | 0.0430 | mg/l | 102 | 104 | 90-112 | 1 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0047 | mg/l | 108 | 108 | 88-110 | 1 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0047 | mg/l | 106 | 107 | 90-110 | 1 | 20 |
| Magnesium | 0.0191 J | 0.200 | 0.0167 | mg/l | 101 | 102 | 89-110 | 1 | 20 |
| Manganese | 0.0100 U | 0.0100 | 0.00083 | mg/l | 106 | 106 | 90-110 | 1 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0017 | mg/l | 102 | 104 | 90-110 | 1 | 20 |
| Nickel | 0.0200 U | 0.0200 | 0.0015 | mg/l | 109 | 110 | 90-111 | 1 | 20 |
| Phosphorus | 0.200 U | 0.200 | 0.0418 | mg/l | 103 | 103 | 90-110 | 1 | 20 |
| Potassium | 1.00 U | 1.00 | 0.0980 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 102 | 103 | 87-114 | 1 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0029 | mg/l | 98 | 100 | 90-110 | 1 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 106 | 106 | 90-113 | 0 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0020 | mg/l | 109 | 109 | 90-110 | 0 | 20 |
| Zinc | 0.0400 U | 0.0400 | 0.0020 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Zirconium | 0.100 U | 0.100 | 0.0084 | mg/l | 104 | 105 | 90-110 | 1 | 20 |
| Batch number: 140210639002A | Sample number(s): 7336151 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 106 | 103 | 90-115 | 3 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 102 | 101 | 90-110 | 0 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 103 | 110 | 90-115 | 7 | 20 |
| Batch number: 140210639002B | Sample number(s): 7336151 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 99 | 103 | 90-120 | 4 | 20 |
| Batch number: 14016002101A | Sample number(s): 7336151 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 100 | | 90-110 | | |
| Batch number: 14016039401A | Sample number(s): 7336139 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14016039401B | Sample number(s): 7336140,7336143-7336149 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14022162401B | Sample number(s): 7336139-7336149 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 99 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14021001 | Sample number(s): 7336151 | | | | | | | | |
| 2378-TCDD | 2.00 U | 2.00 | 0.973 | pg/l | 99 | | 60-150 | | |
| 12378-PeCDD | 0.845 J | 10.0 | 0.706 | pg/l | 100 | | 60-150 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 123478-HxCDD | 10.0 | U | 10.0 | 0.410 | pg/l | 106 | | 60-150 | | |
| 123678-HxCDD | 0.798 | J | 10.0 | 0.447 | pg/l | 103 | | 60-150 | | |
| 123789-HxCDD | 0.671 | J | 10.0 | 0.427 | pg/l | 103 | | 60-150 | | |
| 1234678-HpCDD | 1.72 | J | 10.0 | 0.422 | pg/l | 107 | | 60-150 | | |
| OCDD | 3.47 | J | 20.0 | 0.392 | pg/l | 104 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.657 | pg/l | 103 | | 60-150 | | |
| 12378-PeCDF | 0.852 | J | 10.0 | 0.396 | pg/l | 105 | | 60-150 | | |
| 23478-PeCDF | 0.413 | J | 10.0 | 0.350 | pg/l | 107 | | 60-150 | | |
| 123478-HxCDF | 0.849 | J | 10.0 | 0.269 | pg/l | 105 | | 60-150 | | |
| 123678-HxCDF | 0.507 | J | 10.0 | 0.286 | pg/l | 106 | | 60-150 | | |
| 123789-HxCDF | 1.39 | J | 10.0 | 0.310 | pg/l | 107 | | 60-150 | | |
| 234678-HxCDF | 10.0 | U | 10.0 | 0.270 | pg/l | 108 | | 60-150 | | |
| 1234678-HpCDF | 0.834 | J | 10.0 | 0.155 | pg/l | 105 | | 60-150 | | |
| 1234789-HpCDF | 1.32 | J | 10.0 | 0.214 | pg/l | 107 | | 60-150 | | |
| OCDF | 2.37 | J | 20.0 | 0.537 | pg/l | 102 | | 60-150 | | |
| Batch number: 14021002 | Sample number(s): 7336139-7336142,7336144-7336149 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0767 | ng/kg | 96 | | 67-158 | | |
| 12378-PeCDD | 5.00 | U | 5.00 | 0.0346 | ng/kg | 95 | | 70-142 | | |
| 123478-HxCDD | 0.0478 | J | 5.00 | 0.0241 | ng/kg | 97 | | 70-164 | | |
| 123678-HxCDD | 0.0467 | J | 5.00 | 0.0254 | ng/kg | 100 | | 76-134 | | |
| 123789-HxCDD | 0.0330 | J | 5.00 | 0.0240 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.121 | J | 5.00 | 0.0212 | ng/kg | 95 | | 70-140 | | |
| OCDD | 0.267 | J | 10.0 | 0.0249 | ng/kg | 94 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0581 | ng/kg | 97 | | 75-158 | | |
| 12378-PeCDF | 0.0637 | J | 5.00 | 0.0208 | ng/kg | 97 | | 80-134 | | |
| 23478-PeCDF | 0.0767 | J | 5.00 | 0.0191 | ng/kg | 98 | | 68-160 | | |
| 123478-HxCDF | 0.0277 | J | 5.00 | 0.0214 | ng/kg | 100 | | 72-134 | | |
| 123678-HxCDF | 0.0458 | J | 5.00 | 0.0207 | ng/kg | 100 | | 84-130 | | |
| 123789-HxCDF | 0.0999 | J | 5.00 | 0.0205 | ng/kg | 100 | | 78-130 | | |
| 234678-HxCDF | 0.0497 | J | 5.00 | 0.0202 | ng/kg | 100 | | 70-156 | | |
| 1234678-HpCDF | 0.0573 | J | 5.00 | 0.00928 | ng/kg | 98 | | 82-122 | | |
| 1234789-HpCDF | 0.0611 | J | 5.00 | 0.0116 | ng/kg | 100 | | 78-138 | | |
| OCDF | 0.235 | J | 10.0 | 0.0344 | ng/kg | 99 | | 63-170 | | |
| Batch number: 14021001 | Sample number(s): 7336151 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.233 | | | | pg/l | | | | | |
| Batch number: 14021002 | Sample number(s): 7336139-7336142,7336144-7336149 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0318 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14022SLC026 | Sample number(s): 7336139-7336142,7336144-7336149 UNSPK: 7336140 | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 102 | 105 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 96 | 99 | 49-121 | 4 | 30 | | | | |
| Anthracene | 103 | 111 | 52-126 | 7 | 30 | | | | |
| Benzo(a)anthracene | 95 | 103 | 44-143 | 8 | 30 | | | | |
| Benzo(a)pyrene | 96 | 102 | 44-140 | 6 | 30 | | | | |
| Benzo(b)fluoranthene | 104 | 112 | 26-142 | 6 | 30 | | | | |
| Benzo(e)pyrene | 95 | 102 | 70-130 | 7 | 30 | | | | |
| Benzo(g,h,i)perylene | 48 | 51 | 33-141 | 7 | 30 | | | | |
| Benzo(k)fluoranthene | 97 | 104 | 54-142 | 6 | 30 | | | | |
| Butylbenzylphthalate | 137 | 151 | 49-151 | 10 | 30 | | | | |
| Di-n-butylphthalate | 113 | 122 | 52-147 | 8 | 30 | | | | |
| Chrysene | 64 | 73 | 29-148 | 8 | 30 | | | | |
| Dibenz(a,h)anthracene | 64 | 68 | 20-137 | 6 | 30 | | | | |
| Diethylphthalate | 104 | 108 | 43-145 | 4 | 30 | | | | |
| Dimethylphthalate | 100 | 105 | 58-129 | 4 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 147 | 155 | 39-167 | 5 | 30 | | | | |
| Fluoranthene | 93 | 105 | 40-148 | 11 | 30 | | | | |
| Fluorene | 90 | 99 | 51-137 | 9 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 58 | 63 | 17-136 | 7 | 30 | | | | |
| 1-Methylnaphthalene | 96 | 100 | 50-131 | 4 | 30 | | | | |
| 2-Methylnaphthalene | 99 | 104 | 35-152 | 5 | 30 | | | | |
| Naphthalene | 98 | 100 | 31-148 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 73 | 85 | 48-113 | 15 | 30 | | | | |
| Di-n-octylphthalate | 173* | 175* | 52-162 | 2 | 30 | | | | |
| Phenanthrene | 98 | 105 | 29-142 | 7 | 30 | | | | |
| Pyrene | 133 | 149* | 26-143 | 10 | 30 | | | | |
| Batch number: 14016B16A | Sample number(s): 7336140-7336142,7336144-7336146,7336148-7336149 UNSPK: 7336140 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 75 | 71 | 69-123 | 10 | 30 | | | | |
| Batch number: 140210001A | Sample number(s): 7336151 UNSPK: 7336151 | | | | | | | | |
| Perchlorate in Water LC/MS/MS | 90 | 92 | 80-120 | 2 | 20 | | | | |
| Batch number: 140210005A | Sample number(s): 7336139-7336142,7336144-7336149 UNSPK: 7336140 | | | | | | | | |
| PCB-1016 | 89 | 100 | 41-135 | 12 | 50 | | | | |
| PCB-1260 | 89 | 98 | 40-134 | 10 | 50 | | | | |
| Batch number: 140220009A | Sample number(s): 7336139-7336142,7336144-7336149 UNSPK: 7336140 | | | | | | | | |
| EFH (C12-C14) | 100 | 111 | 49-123 | 10 | 20 | | | | |
| EFH (C15-C20) | 105 | 116 | 49-123 | 10 | 20 | | | | |
| EFH (C21-C30) | 108 | 151* | 49-123 | 33* | 20 | | | | |
| EFH (C30-C40) | 95 | 194* | 49-123 | 68* | 20 | | | | |
| EFH (C8-C11) | 82 | 105 | 49-123 | 25* | 20 | | | | |
| Batch number: 140150638001 | Sample number(s): 7336140-7336146,7336148-7336149 UNSPK: 7336140 BKG: 7336140 | | | | | | | | |
| 3a Mercury 7471A | 108 | 110 | 65-135 | 2 | 20 | 0.0166 U | 0.0162 U | 0 (1) | 20 |
| Batch number: 140160638002 | Sample number(s): 7336139,7336147 UNSPK: 7336139 BKG: 7336139 | | | | | | | | |
| 3a Mercury 7471A | 103 | 102 | 65-135 | 1 | 20 | 0.0217 | 0.0544 | 86* (1) | 20 |
| Batch number: 140200637001 | Sample number(s): 7336139-7336149 UNSPK: 7336140 BKG: 7336140 | | | | | | | | |
| Aluminum | 1856 | 1826 | 75-125 | 0 | 20 | 14,300 | 14,700 | 3 | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| | (2) | (2) | | | | | | | |
| Antimony | 69* | 68* | 75-125 | 2 | 20 | 3.96 U | 3.96 U | 0 (1) | 20 |
| Arsenic | 103 | 104 | 75-125 | 1 | 20 | 4.00 | 4.16 | 4 (1) | 20 |
| Barium | 104 | 98 | 75-125 | 4 | 20 | 89.9 | 90.7 | 1 | 20 |
| Beryllium | 101 | 101 | 75-125 | 0 | 20 | 0.647 J | 0.648 J | 0 (1) | 20 |
| Boron | 94 | 95 | 75-125 | 0 | 20 | 1.50 J | 1.30 J | 14 (1) | 20 |
| Cadmium | 84 | 84 | 75-125 | 0 | 20 | 0.990 U | 0.990 U | 0 (1) | 20 |
| Calcium | 177 (2) | 150 (2) | 75-125 | 3 | 20 | 3,190 | 3,150 | 1 | 20 |
| Chromium | 101 | 106 | 75-125 | 2 | 20 | 22.1 | 23.0 | 4 | 20 |
| Cobalt | 95 | 92 | 75-125 | 3 | 20 | 4.87 | 4.83 | 1 (1) | 20 |
| Copper | 106 | 108 | 75-125 | 1 | 20 | 15.7 | 15.9 | 1 | 20 |
| Iron | 1232 | 1208 | 75-125 | 0 | 20 | 20,100 | 20,100 | 0 | 20 |
| | (2) | (2) | | | | | | | |
| Lead | 98 | 97 | 75-125 | 1 | 20 | 5.56 | 5.53 | 1 (1) | 20 |
| Lithium | 100 | 99 | 75-125 | 1 | 20 | 24.2 | 23.4 | 3 | 20 |
| Magnesium | 238 (2) | 236 (2) | 75-125 | 0 | 20 | 4,310 | 4,260 | 1 | 20 |
| Manganese | 213 (2) | 136 (2) | 75-125 | 10 | 20 | 289 | 283 | 2 | 20 |
| Molybdenum | 93 | 92 | 75-125 | 0 | 20 | 1.93 J | 2.10 | 8 (1) | 20 |
| Nickel | 98 | 97 | 75-125 | 1 | 20 | 11.4 | 11.8 | 4 | 20 |
| Phosphorus | 85 | 99 | 75-125 | 4 | 20 | 313 | 292 | 7 | 20 |
| Potassium | 111 | 124 | 75-125 | 3 | 20 | 2,520 | 2,440 | 3 | 20 |
| Sodium | 97 | 97 | 75-125 | 0 | 20 | 159 | 159 | 0 (1) | 20 |
| Tin | 87 | 87 | 75-125 | 1 | 20 | 3.00 J | 2.88 J | 4 (1) | 20 |
| Titanium | 233 (2) | 267 (2) | 75-125 | 3 | 20 | 1,100 | 1,070 | 3 | 20 |
| Vanadium | 107 | 107 | 75-125 | 0 | 20 | 35.3 | 34.7 | 2 | 20 |
| Zinc | 93 | 95 | 75-125 | 1 | 20 | 50.5 | 49.5 | 2 | 20 |
| Zirconium | 96 | 95 | 75-125 | 0 | 20 | 3.06 J | 3.39 J | 10 (1) | 20 |
| Batch number: 140200637001A | Sample number(s): 7336139-7336149 UNSPK: 7336140 BKG: 7336140 | | | | | | | | |
| Silver | 109 | 112 | 75-125 | 3 | 20 | 0.0322 J | 0.0370 J | 14 (1) | 20 |
| Strontium | 132* | 158* | 75-125 | 6 | 20 | 22.1 | 22.8 | 3 | 20 |
| Thallium | 110 | 111 | 75-125 | 1 | 20 | 0.236 | 0.252 | 7 (1) | 20 |
| Batch number: 140200637001B | Sample number(s): 7336139-7336149 UNSPK: 7336140 BKG: 7336140 | | | | | | | | |
| Selenium | 111 | 120 | 75-125 | 8 | 20 | 0.396 U | 0.396 U | 0 (1) | 20 |
| Batch number: 14016002101A | Sample number(s): 7336151 BKG: P335994 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 8.3 | 8.5 | 2 | 3 |
| Batch number: 14016039401A | Sample number(s): 7336139 BKG: P335019 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.32 | 7.28 | 1 | 3 |
| Batch number: 14016039401B | Sample number(s): 7336140,7336143-7336149 BKG: 7336140 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.42 | 7.61 | 3 | 3 |
| Batch number: 14022162401B | Sample number(s): 7336139-7336149 BKG: 7336140 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 9.2 | 9.0 | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 9.2 | 9.0 | 2 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 9.2 | 9.0 | 2 | 20 |
| Batch number: 14021002 | Sample number(s): 7336139-7336142,7336144-7336149 UNSPK: 7336140 | | | | | | | | |
| 2378-TCDD | 94 | 95 | 40-135 | 1 | 20 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 12378-PeCDD | 96 | 98 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 97 | 96 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 98 | 98 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDD | 97 | 97 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 96 | 96 | 40-135 | 2 | 20 | | | | |
| OCDD | 97 | 100 | 40-135 | 1 | 20 | | | | |
| 2378-TCDF | 95 | 94 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDF | 97 | 97 | 40-135 | 2 | 20 | | | | |
| 23478-PeCDF | 97 | 97 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDF | 101 | 100 | 40-135 | 4 | 20 | | | | |
| 123678-HxCDF | 101 | 100 | 40-135 | 4 | 20 | | | | |
| 123789-HxCDF | 100 | 101 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 100 | 100 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDF | 99 | 99 | 40-135 | 3 | 20 | | | | |
| 1234789-HpCDF | 99 | 100 | 40-135 | 1 | 20 | | | | |
| OCDF | 96 | 96 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14020WAH026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7336151 | 95 | 97 | 99 |
| Blank | 99 | 102 | 104 |
| LCS | 100 | 101 | 106 |
| LCSD | 99 | 102 | 106 |
| Limits: | 44-137 | 62-141 | 51-136 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14022SLC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7336139 | 87 | 90 | 95 |
| 7336140 | 79 | 90 | 94 |
| 7336141 | 83 | 89 | 95 |
| 7336142 | 91 | 93 | 99 |
| 7336144 | 83 | 85 | 92 |
| 7336145 | 82 | 89 | 92 |
| 7336146 | 84 | 86 | 90 |
| 7336147 | 81 | 84 | 91 |
| 7336148 | 85 | 86 | 94 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| 7336149 | 87 | 89 | 94 |
| Blank | 85 | 83 | 89 |
| LCS | 89 | 87 | 96 |
| MS | 83 | 89 | 95 |
| MSD | 91 | 93 | 99 |
| Limits: | 54-129 | 59-125 | 61-125 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14016A94A

| | Trifluorotoluene-F |
|---|---|
| 7336150 | 86 |
| 7336151 | 84 |
| Blank | 86 |
| LCS | 90 |
| LCSD | 91 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14016B16A

| | Trifluorotoluene-F |
|---|---|
| 7336140 | 69 |
| 7336141 | 78 |
| 7336142 | 72 |
| 7336144 | 93 |
| 7336145 | 80 |
| 7336146 | 76 |
| 7336148 | 80 |
| 7336149 | 84 |
| Blank | 101 |
| LCS | 97 |
| MS | 78 |
| MSD | 72 |
| Limits: | 50-142 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 140200023A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7336151 | 98 | 57 |
| Blank | 88 | 75 |
| LCS | 83 | 48 |
| LCSD | 82 | 69 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 140210005A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7336139 | 109 | 95 |
| 7336140 | 106 | 95 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7336141 | 95 | 93 |
| 7336142 | 105 | 101 |
| 7336144 | 106 | 97 |
| 7336145 | 110 | 99 |
| 7336146 | 91 | 86 |
| 7336147 | 125* | 64 |
| 7336148 | 109 | 93 |
| 7336149 | 105 | 87 |
| Blank | 112 | 104 |
| LCS | 106 | 102 |
| LCSD | 106 | 105 |
| MS | 95 | 93 |
| MSD | 105 | 101 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 140200007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7336151 | 85 | 82 |
| Blank | 91 | 84 |
| LCS | 96 | 91 |
| LCSD | 98 | 95 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 140220009A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7336139 | 93 | 93 |
| 7336140 | 90 | 108 |
| 7336141 | 101 | 100 |
| 7336142 | 91 | 110 |
| 7336144 | 96 | 96 |
| 7336145 | 97 | 96 |
| 7336146 | 98 | 105 |
| 7336147 | 97 | 115 |
| 7336148 | 93 | 110 |
| 7336149 | 97 | 91 |
| Blank | 97 | 96 |
| LCS | 100 | 100 |
| MS | 101 | 100 |
| MSD | 91 | 110 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14021001

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7336151 | 52 | 65 | 81 | 82 | 78 | 78 |
| Blank | 54 | 68 | 86 | 87 | 85 | 90 |
| OPR | 45 | 64 | 83 | 84 | 82 | 80 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7336151 | 80 | 73 | 80 | 57 | 70 | 72 |
| Blank | 91 | 79 | 84 | 62 | 77 | 79 |
| OPR | 83 | 77 | 88 | 56 | 73 | 76 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7336151 | 69 | 70 | 72 | 62 | 65 | |
| Blank | 75 | 79 | 78 | 61 | 69 | |
| OPR | 73 | 72 | 80 | 58 | 61 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14021002

| | 13C12-2378-TCDD | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF | 13C12-123789-HxCDF |
|---|---|---|---|---|---|---|
| 7336139 | 58 | 59 | 68 | 69 | 69 | 70 |
| 7336140 | 57 | 58 | 64 | 66 | 65 | 66 |
| 7336141 | 54 | 56 | 64 | 65 | 65 | 72 |
| 7336142 | 57 | 58 | 67 | 69 | 68 | 70 |
| 7336144 | 60 | 60 | 67 | 67 | 68 | 73 |
| 7336145 | 67 | 64 | 75 | 77 | 77 | 78 |
| 7336146 | 59 | 57 | 67 | 70 | 68 | 74 |
| 7336147 | 59 | 60 | 72 | 74 | 73 | 70 |
| 7336148 | 65 | 63 | 76 | 77 | 76 | 78 |
| 7336149 | 73 | 68 | 77 | 79 | 78 | 77 |
| Blank | 61 | 63 | 70 | 72 | 72 | 78 |
| MS | 54 | 56 | 64 | 65 | 65 | 72 |
| MSD | 57 | 58 | 67 | 69 | 68 | 70 |
| OPR | 56 | 58 | 66 | 68 | 68 | 70 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 25-164 | 21-178 | 26-152 | 26-123 | 28-136 | 29-147 |
| | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD |
| 7336139 | 74 | 69 | 58 | 61 | 74 | 73 |
| 7336140 | 69 | 64 | 43 | 59 | 71 | 68 |
| 7336141 | 65 | 60 | 53 | 57 | 69 | 70 |
| 7336142 | 72 | 66 | 62 | 59 | 73 | 72 |
| 7336144 | 75 | 67 | 62 | 61 | 73 | 72 |
| 7336145 | 83 | 74 | 68 | 65 | 75 | 77 |
| 7336146 | 76 | 66 | 61 | 58 | 69 | 67 |
| 7336147 | 81 | 68 | 63 | 62 | 74 | 73 |
| 7336148 | 83 | 73 | 70 | 65 | 77 | 75 |
| 7336149 | 82 | 75 | 72 | 69 | 81 | 80 |
| Blank | 79 | 70 | 67 | 66 | 77 | 77 |
| MS | 65 | 60 | 53 | 57 | 69 | 70 |
| MSD | 72 | 66 | 62 | 59 | 73 | 72 |
| OPR | 75 | 66 | 63 | 60 | 72 | 71 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1446014
Reported: 01/31/14 at 08:59 AM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 28-143 | 26-138 | 17-157 | 25-181 | 32-141 | 28-130 |
| | 13C12-123789-HxCDD | 13C12-1234678-HpCDD | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | |
| 7336139 | 73 | 74 | 64 | 55 | 58 | |
| 7336140 | 69 | 68 | 47 | 55 | 57 | |
| 7336141 | 69 | 64 | 57 | 51 | 55 | |
| 7336142 | 73 | 72 | 67 | 55 | 57 | |
| 7336144 | 73 | 74 | 69 | 58 | 60 | |
| 7336145 | 77 | 77 | 74 | 63 | 64 | |
| 7336146 | 69 | 69 | 68 | 56 | 57 | |
| 7336147 | 74 | 72 | 69 | 56 | 60 | |
| 7336148 | 77 | 77 | 73 | 61 | 63 | |
| 7336149 | 80 | 79 | 79 | 69 | 69 | |
| Blank | 77 | 79 | 75 | 58 | 63 | |
| MS | 69 | 64 | 57 | 51 | 55 | |
| MSD | 73 | 72 | 67 | 55 | 57 | |
| OPR | 72 | 73 | 71 | 53 | 58 | |
| Limits: | 28-130 | 23-140 | 17-157 | 24-169 | 24-185 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

A-13013

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 1/14/2014 G-1446014

CarrierName: FedEx

AirbillNo: 797634322639 S-733613951

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140114-02

Cooler #: 2

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-839-SA5B-SB-0.0-0.5 | 1/14/14 09:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-839-SA5B-SB-0.0-0.5 | 1/14/14 09:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SL-839-SA5B-SB-4.0-5.0MS | 1/14/14 09:15 | SO | None | 6 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | MS/MSD |
| SL-839-SA5B-SB-4.0-5.0MS | 1/14/14 09:15 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | MS/MSD |
| SL-1139-SA5B-SB-4.0-5.0 | 1/14/14 09:10 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-1139-SA5B-SB-4.0-5.0 | 1/14/14 09:10 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-839-SA5B-SB-9.0-10.0 | 1/14/14 10:15 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-839-SA5B-SB-9.0-10.0 | 1/14/14 10:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-839-SA5B-SB-15.5-16.5 | 1/14/14 10:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-839-SA5B-SB-15.5-16.5 | 1/14/14 10:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-843-SA5B-SB-0.0-0.5 | 1/14/14 13:10 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-843-SA5B-SB-0.0-0.5 | 1/14/14 13:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| SL-843-SA5B-SB-4.0-5.0 | 1/14/14 13:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-843-SA5B-SB-4.0-5.0 | 1/14/14 13:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-843-SA5B-SB-7.0-8.0 | 1/14/14 13:40 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-843-SA5B-SB-7.0-8.0 | 1/14/14 13:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| TB-011414 | 1/14/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

A-13013
G-1446014
S-7336139-51

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 1/14/2014
CarrierName: FedEx
AirbillNo: 797634322639

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140114-02
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | CEshlm | 1/15/14 | 1000 |

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 1/14/2014 A-13013

CarrierName: FedEx G-1446014

AirbillNo: 797634322639 S-7336139-51

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140114-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc.Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-011414 | 1/14/14 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-011414 | 1/14/14 15:00 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-011414 | 1/14/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-011414 | 1/14/14 15:00 | WQ | None | 1 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| EB-011414 | 1/14/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB-011414 | 1/14/14 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB-011414 | 1/14/14 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pam Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 01/14/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 1/15/14 | ~~of~~ 1000 |

③ CE 1/15/14

COC Rev 3

COC: 20140114-01, Page 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 2280

Client: CDM SMITH

G-1446014

## SSFL PHASE 3

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 01/15/2014 10:00 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Trip Blank Present: | Yes |
| Custody Seal Present: | Yes | Trip Blank Indicated on COC: | Yes |
| Custody Seal Intact: | Yes | Trip Blank Type: | N/A |
| Samples Chilled: | Yes | Trip Blank Qty: | 0 |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | Air Quality Flow Controllers Present: | N/A |
| Missing Samples: | No | Flow Controller Quantity: | 0 |
| Extra Samples: | No | Air Quality Returns: | N/A |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace at least 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Corey Eshleman (3647) at 11:18 on 01/15/2014

### Samples Chilled Details: SSFL PHASE 3

| Cooler # | Thermometer ID | Raw Temp (°C) | Corrected Temp (°C) | Thermometer Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 0.8 | 0.8 | DT | Wet | Y | Bagged | N |
| 2 | DT121 | 1.0 | 1.0 | DT | Wet | Y | Bagged | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 21, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/08/2014
Group Number: 1473052
SDG: PH172
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| FDG-SL-798-SA5B-SB-0.0-0.5 Soil | 7457065 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** FDG-SL-798-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7457065**
**LL Group # 1473052**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/07/2014 12:29 by WT

Submitted: 05/08/2014 09:20
Reported: 05/21/2014 16:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL798 SDG#: PH172-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 0.98 | J | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 29 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 29 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 430 | | 84 | 34 | 50 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 680 | | 84 | 34 | 50 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2,600 | | 84 | 34 | 50 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 1,100 | | 860 | 170 | 50 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 590 | | 84 | 34 | 50 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 250 | | 84 | 34 | 50 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 9.0 | J | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2,000 | | 84 | 17 | 50 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 190 | | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 33 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 330 | | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 770 | | 84 | 34 | 50 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 18 | | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 24 | | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 19 | | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 10 | J | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 160 | | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 280 | | 1.7 | 0.67 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 30 | J | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 32 | | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 19 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 38 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-798-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7457065**
**LL Group # 1473052**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/07/2014 12:29 by WT

Submitted: 05/08/2014 09:20
Reported: 05/21/2014 16:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL798 SDG#: PH172-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 8.5 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 8.9 | J | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,800 | | 41.0 | 7.39 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.759 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.74 | | 4.10 | 0.718 | 1 |
| 06946 | Barium | 7440-39-3 | 70.9 | | 1.03 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.473 | J | 1.03 | 0.0687 | 1 |
| 07914 | Boron | 7440-42-8 | 4.85 | J | 10.3 | 0.862 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.450 | J | 1.03 | 0.0779 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,520 | | 20.5 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.7 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.00 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 17.6 | | 2.05 | 0.297 | 1 |
| 01654 | Iron | 7439-89-6 | 14,700 | | 41.0 | 3.71 | 1 |
| 06955 | Lead | 7439-92-1 | 20.1 | | 3.08 | 0.513 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.0 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,150 | | 10.3 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 380 | | 1.03 | 0.0851 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.330 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.6 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 297 | | 10.3 | 2.96 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,620 | | 103 | 8.55 | 1 |
| 01667 | Sodium | 7440-23-5 | 114 | | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.82 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 875 | | 1.03 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.4 | | 1.03 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 157 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.32 | J | 5.13 | 0.862 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.215 | J | 0.410 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 1.31 | | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 25.8 | | 0.410 | 0.0697 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.207 | | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0732 | | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.81 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.5 | | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-798-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7457065**
**LL Group # 1473052**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/07/2014 12:29 by WT

Submitted: 05/08/2014 09:20
Reported: 05/21/2014 16:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL798 SDG#: PH172-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-798-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7457065**
**LL Group # 1473052**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/07/2014 12:29 by WT

Submitted: 05/08/2014 09:20
Reported: 05/21/2014 16:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL798 SDG#: PH172-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.173 | J | 0.980 | 0.0931 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.30 | JQ | 4.90 | 0.158 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 8.61 | | 4.90 | 0.0983 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 35.3 | B | 4.90 | 0.0988 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 18.6 | B | 4.90 | 0.0952 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 891 | B | 4.90 | 0.202 | 1 |
| 11031 | OCDD | 3268-87-9 | 9,400 | EB | 9.80 | 0.120 | 1 |
| 11650 | 2378-TCDF-Conf | 51207-31-9 | 1.32 | C | 0.980 | 0.122 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 4.15 | J | 4.90 | 0.0873 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 2.16 | JB | 4.90 | 0.0844 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 3.56 | JB | 4.90 | 0.109 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 3.98 | JB | 4.90 | 0.105 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 4.90 | U | 4.90 | 0.118 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 6.01 | B | 4.90 | 0.106 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 114 | | 4.90 | 0.0771 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 7.70 | B | 4.90 | 0.0942 | 1 |
| 11031 | OCDF | 39001-02-0 | 337 | B | 9.80 | 0.0631 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 21.7 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDF-Conf | 68 | 24 - 169 |
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 90 | 23 - 140 |
| 13C12-OCDD | 101 | 17 - 157 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 75 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 79 | 26 - 138 |
| 13C12-OCDF | 78 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-798-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7457065**
**LL Group # 1473052**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/07/2014 12:29 by WT

Submitted: 05/08/2014 09:20
Reported: 05/21/2014 16:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL798 SDG#: PH172-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-798-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7457065**
**LL Group # 1473052**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/07/2014 12:29 by WT

Submitted: 05/08/2014 09:20
Reported: 05/21/2014 16:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL798 SDG#: PH172-01*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 04:24 | Mark A Clark | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 06:31 | Mark A Clark | 50 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14133SLF026 | 05/13/2014 21:30 | Karen L Beyer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141330006A | 05/18/2014 20:56 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141330006A | 05/13/2014 14:30 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141330030A | 05/14/2014 19:12 | Heather E Williams | 1 |
| 13197 | EFH Soil (microwave) w/SiGel | SW-846 8015B modified | 1 | 141330031A | 05/19/2014 18:18 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141330031A | 05/14/2014 09:05 | Katheryne V Sponheimer | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141330030A | 05/14/2014 09:05 | Katheryne V Sponheimer | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14132002 | 05/15/2014 02:29 | Joseph D Anderson | 1 |
| 11650 | Dioxins/Furans in Solids-Conf | EPA 1613B October 1994 | 1 | 14132002 | 05/15/2014 19:08 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14132002 | 05/12/2014 13:00 | Brett M Weidman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-798-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7457065**
**LL Group # 1473052**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/07/2014 12:29 by WT

Submitted: 05/08/2014 09:20
Reported: 05/21/2014 16:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

SL798 SDG#: PH172-01*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:56 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:13 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:13 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:13 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:13 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 08:55 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14129039401A | 05/09/2014 21:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473052
Reported: 05/21/14 at 04:45 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14133SLF026 | Sample number(s): 7457065 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 91 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 116 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 121 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 124 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 80-119 | | |
| Batch number: 141330006A | Sample number(s): 7457065 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 83 | 85 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 94 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 99 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141330030A | Sample number(s): 7457065 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 87 | | 76-115 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473052
Reported: 05/21/14 at 04:45 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 56 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 82 | | 60-115 | | |
| Batch number: 141330031A | Sample number(s): 7457065 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 82 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 72 | | 60-115 | | |
| Batch number: 141340637004 | Sample number(s): 7457065 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 108 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 1.15 | J | 10.0 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 104 | | 80-120 | | |
| Calcium | 13.6 | J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 108 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 104 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.35 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 103 | | 80-120 | | |
| Zinc | 0.568 | J | 4.00 | 0.200 | mg/kg | 103 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141340637004A | Sample number(s): 7457065 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.0750 | J | 0.400 | 0.0680 | mg/kg | 100 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141340637004B | Sample number(s): 7457065 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 109 | | 80-120 | | |
| Batch number: 141350638001 | Sample number(s): 7457065 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 91 | | 85-120 | | |
| Batch number: 14129039401A | Sample number(s): 7457065 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 99 | | 95-105 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473052
Reported: 05/21/14 at 04:45 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14136162401A | Sample number(s): 7457065 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14132002 | Sample number(s): 7457065 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0424 | ng/kg | 91 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0342 | ng/kg | 93 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0270 | ng/kg | 97 | | 70-164 | | |
| 123678-HxCDD | 0.0350 J | 5.00 | 0.0291 | ng/kg | 94 | | 76-134 | | |
| 123789-HxCDD | 0.0308 J | 5.00 | 0.0293 | ng/kg | 94 | | 64-162 | | |
| 1234678-HpCDD | 0.0581 J | 5.00 | 0.0254 | ng/kg | 94 | | 70-140 | | |
| OCDD | 0.466 J | 10.0 | 0.0310 | ng/kg | 90 | | 78-144 | | |
| 2378-TCDF-Conf | 1.00 U | 1.00 | 0.0247 | ng/kg | 106 | | 75-158 | | |
| 12378-PeCDF | 5.00 U | 5.00 | 0.0148 | ng/kg | 94 | | 80-134 | | |
| 23478-PeCDF | 0.0180 J | 5.00 | 0.0158 | ng/kg | 96 | | 68-160 | | |
| 123478-HxCDF | 0.0389 J | 5.00 | 0.0206 | ng/kg | 93 | | 72-134 | | |
| 123678-HxCDF | 0.0250 J | 5.00 | 0.0173 | ng/kg | 93 | | 84-130 | | |
| 123789-HxCDF | 0.0281 J | 5.00 | 0.0236 | ng/kg | 95 | | 78-130 | | |
| 234678-HxCDF | 0.0270 J | 5.00 | 0.0184 | ng/kg | 93 | | 70-156 | | |
| 1234678-HpCDF | 5.00 U | 5.00 | 0.0162 | ng/kg | 88 | | 82-122 | | |
| 1234789-HpCDF | 0.0343 J | 5.00 | 0.0253 | ng/kg | 93 | | 78-138 | | |
| OCDF | 0.146 J | 10.0 | 0.0404 | ng/kg | 92 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00673 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14133SLF026 | Sample number(s): 7457065 UNSPK: P457971 | | | | | | | | |
| Acenaphthene | 107 | 119 | 48-127 | 11 | 30 | | | | |
| Acenaphthylene | 98 | 113 | 60-128 | 15 | 30 | | | | |
| Anthracene | 95 | 127* | 52-126 | 28 | 30 | | | | |
| Benzo(a)anthracene | 105 | 137 | 44-143 | 26 | 30 | | | | |
| Benzo(a)pyrene | 96 | 117 | 49-137 | 20 | 30 | | | | |
| Benzo(b)fluoranthene | 106 | 124 | 26-142 | 16 | 30 | | | | |
| Benzo(e)pyrene | 85 | 96 | 63-111 | 12 | 30 | | | | |
| Benzo(g,h,i)perylene | 84 | 75 | 33-141 | 12 | 30 | | | | |
| Benzo(k)fluoranthene | 89 | 106 | 49-144 | 18 | 30 | | | | |
| Butylbenzylphthalate | 97 | 105 | 64-156 | 7 | 30 | | | | |
| Di-n-butylphthalate | 104 | 122 | 52-147 | 16 | 30 | | | | |
| Chrysene | 95 | 125 | 43-141 | 27 | 30 | | | | |
| Dibenz(a,h)anthracene | 90 | 78 | 25-145 | 14 | 30 | | | | |
| Diethylphthalate | 91 | 102 | 66-140 | 12 | 30 | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473052
Reported: 05/21/14 at 04:45 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Dimethylphthalate | 94 | 116 | 70-123 | 21 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 166* | 48-164 | 39* | 30 | | | | |
| Fluoranthene | 93 | 145 | 38-153 | 42* | 30 | | | | |
| Fluorene | 88 | 99 | 57-130 | 12 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 89 | 82 | 26-139 | 8 | 30 | | | | |
| 1-Methylnaphthalene | 107 | 247* | 59-139 | 74* | 30 | | | | |
| 2-Methylnaphthalene | 104 | 219* | 46-147 | 67* | 30 | | | | |
| Naphthalene | 90 | 136 | 52-136 | 40* | 30 | | | | |
| N-Nitrosodimethylamine | 82 | 91 | 39-134 | 11 | 30 | | | | |
| Di-n-octylphthalate | 97 | 100 | 52-162 | 3 | 30 | | | | |
| Phenanthrene | 154* | 399* | 50-137 | 82* | 30 | | | | |
| Pyrene | 94 | 144* | 26-143 | 40* | 30 | | | | |
| Batch number: 141330006A | Sample number(s): 7457065 UNSPK: P457971 | | | | | | | | |
| PCB-1016 | 89 | 88 | 41-135 | 2 | 50 | | | | |
| PCB-1260 | 98 | 97 | 40-134 | 0 | 50 | | | | |
| Batch number: 141330030A | Sample number(s): 7457065 UNSPK: 7457065 | | | | | | | | |
| EFH (C12-C14) | 97 | 97 | 49-123 | 0 | 20 | | | | |
| EFH (C15-C20) | 120 | 130* | 49-123 | 8 | 20 | | | | |
| EFH (C21-C30) | 250* | 137* | 49-123 | 33* | 20 | | | | |
| EFH (C30-C40) | 134* | 185* | 49-123 | 13 | 20 | | | | |
| EFH (C8-C11) | 83 | 87 | 49-123 | 5 | 20 | | | | |
| Batch number: 141330031A | Sample number(s): 7457065 UNSPK: 7457065 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 100 | 87 | 49-123 | 14 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 110 | 95 | 49-123 | 14 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 182* | 117 | 49-123 | 30* | 20 | | | | |
| EFH C30-C40 w/ SiGel | 108 | 149* | 49-123 | 22* | 20 | | | | |
| EFH C8-C11 w/ SiGel | 80 | 71 | 49-123 | 12 | 20 | | | | |
| Batch number: 141340637004 | Sample number(s): 7457065 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Aluminum | 3014 (2) | 2861 (2) | 75-125 | 2 | 20 | 13,000 | 12,600 | 4 | 20 |
| Antimony | 47* | 45* | 75-125 | 4 | 20 | 3.85 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 104 | 106 | 75-125 | 2 | 20 | 5.42 | 5.66 | 4 (1) | 20 |
| Barium | 105 | 106 | 75-125 | 1 | 20 | 70.9 | 64.6 | 9 | 20 |
| Beryllium | 103 | 104 | 75-125 | 0 | 20 | 0.543 J | 0.519 J | 4 (1) | 20 |
| Boron | 99 | 101 | 75-125 | 2 | 20 | 1.68 J | 1.41 J | 17 (1) | 20 |
| Cadmium | 95 | 98 | 75-125 | 3 | 20 | 0.962 U | 0.971 U | 0 (1) | 20 |
| Calcium | 369 (2) | 365 (2) | 75-125 | 0 | 20 | 3,160 | 2,780 | 13 | 20 |
| Chromium | 127* | 128* | 75-125 | 1 | 20 | 15.8 | 15.8 | 0 | 20 |
| Cobalt | 98 | 94 | 75-125 | 4 | 20 | 4.73 | 4.51 | 5 (1) | 20 |
| Copper | 120 | 136* | 75-125 | 9 | 20 | 11.2 | 10.9 | 3 | 20 |
| Iron | 3011 (2) | 3164 (2) | 75-125 | 1 | 20 | 18,700 | 17,800 | 5 | 20 |
| Lead | 106 | 115 | 75-125 | 5 | 20 | 8.38 | 7.78 | 7 (1) | 20 |
| Lithium | 104 | 104 | 75-125 | 0 | 20 | 21.6 | 21.2 | 2 | 20 |
| Magnesium | 468 (2) | 442 (2) | 75-125 | 1 | 20 | 3,870 | 3,750 | 3 | 20 |
| Manganese | 198 (2) | 96 (2) | 75-125 | 14 | 20 | 288 | 226 | 24* | 20 |
| Molybdenum | 91 | 91 | 75-125 | 0 | 20 | 0.420 J | 0.214 J | 65* (1) | 20 |
| Nickel | 97 | 102 | 75-125 | 4 | 20 | 12.7 | 12.0 | 6 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473052
Reported: 05/21/14 at 04:45 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Phosphorus | 125 | 154* | 75-125 | 7 | 20 | 260 | 258 | 1 | 20 |
| Potassium | 155* | 150* | 75-125 | 1 | 20 | 2,210 | 2,130 | 4 | 20 |
| Sodium | 98 | 99 | 75-125 | 0 | 20 | 84.1 J | 80.3 J | 5 (1) | 20 |
| Tin | 85 | 85 | 75-125 | 0 | 20 | 2.84 J | 2.62 J | 8 (1) | 20 |
| Titanium | 363 (2) | 380 (2) | 75-125 | 1 | 20 | 923 | 886 | 4 | 20 |
| Vanadium | 116 | 118 | 75-125 | 1 | 20 | 34.5 | 33.0 | 4 | 20 |
| Zinc | 161* | 237* | 75-125 | 22* | 20 | 72.0 | 70.1 | 3 | 20 |
| Zirconium | 98 | 97 | 75-125 | 1 | 20 | 2.95 J | 3.20 J | 8 (1) | 20 |
| Batch number: 141340637004A | Sample number(s): 7457065 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Silver | 105 | 101 | 75-125 | 3 | 20 | 0.0285 J | 0.0266 J | 7 (1) | 20 |
| Strontium | 221* | 184* | 75-125 | 7 | 20 | 27.2 | 23.5 | 15 | 20 |
| Thallium | 116 | 102 | 75-125 | 8 | 20 | 0.262 | 0.225 | 15 (1) | 20 |
| Batch number: 141340637004B | Sample number(s): 7457065 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Selenium | 101 | 111 | 75-125 | 9 | 20 | 0.144 J | 0.159 J | 10 (1) | 20 |
| Batch number: 141350638001 | Sample number(s): 7457065 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| 3a Mercury 7471A | 104 | 101 | 65-135 | 1 | 20 | 0.0132 J | 0.0148 J | 12 (1) | 20 |
| Batch number: 14129039401A | Sample number(s): 7457065 BKG: P457971 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.17 | 8.20 | 0 | 3 |
| Batch number: 14136162401A | Sample number(s): 7457065 BKG: P457971 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 5.0 | 5.0 | 0 | 20 |
| Batch number: 14132002 | Sample number(s): 7457065 UNSPK: P456161 | | | | | | | | |
| 2378-TCDD | 84 | 88 | 40-135 | 4 | 20 | | | | |
| 12378-PeCDD | 90 | 88 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 95 | 94 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDD | 90 | 89 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 88 | 91 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 89 | 89 | 40-135 | 1 | 20 | | | | |
| OCDD | 83 | 100 | 40-135 | 17 | 20 | | | | |
| 2378-TCDF-Conf | 94 | 93 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDF | 94 | 93 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 95 | 95 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDF | 94 | 94 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 93 | 94 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDF | 91 | 90 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 94 | 94 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDF | 89 | 89 | 40-135 | 0 | 20 | | | | |
| 1234789-HpCDF | 89 | 88 | 40-135 | 2 | 20 | | | | |
| OCDF | 90 | 91 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473052
Reported: 05/21/14 at 04:45 PM

## Surrogate Quality Control

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14133SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7457065 | 90 | 106 | 85 |
| Blank | 97 | 115 | 91 |
| LCS | 97 | 114 | 91 |
| MS | 87 | 105 | 82 |
| MSD | 93 | 104 | 88 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141330006A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7457065 | 95 | 105 |
| Blank | 101 | 96 |
| LCS | 105 | 104 |
| LCSD | 110 | 115 |
| MS | 97 | 105 |
| MSD | 98 | 108 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141330030A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7457065 | 80 | 97 |
| Blank | 71 | 86 |
| LCS | 76 | 91 |
| MS | 78 | 94 |
| MSD | 79 | 97 |
| Limits: | 37-125 | 66-123 |

Analysis Name: EFH Soil (microwave) w/SiGel
Batch number: 141330031A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7457065 | 70 | 85 |
| Blank | 75 | 91 |
| LCS | 82 | 99 |
| MS | 87 | 102 |
| MSD | 75 | 87 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14132002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7457065 | 73 | 78 | 78 | 77 | 80 | 90 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473052
Reported: 05/21/14 at 04:45 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Blank | 90 | 96 | 94 | 93 | 90 | 111 |
| MS | 81 | 87 | 88 | 87 | 91 | 94 |
| MSD | 79 | 84 | 87 | 86 | 87 | 97 |
| OPR | 80 | 86 | 87 | 91 | 93 | 101 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |
| | 13C12-OCDD | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF | 13C12-234678-HxCDF |
| 7457065 | 101 | 75 | 71 | 73 | 75 | 74 |
| Blank | 91 | 106 | 94 | 81 | 96 | 88 |
| MS | 92 | 85 | 77 | 80 | 85 | 82 |
| MSD | 87 | 85 | 76 | 76 | 82 | 80 |
| OPR | 91 | 96 | 79 | 72 | 87 | 82 |
| Limits: | 17-157 | 24-185 | 21-178 | 26-152 | 26-123 | 28-136 |
| | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-2378-TCDF-Conf | |
| 7457065 | 72 | 85 | 79 | 78 | 68 | |
| Blank | 79 | 119 | 86 | 70 | 71 | |
| MS | 92 | 103 | 78 | 73 | 75 | |
| MSD | 89 | 100 | 76 | 70 | 74 | |
| OPR | 79 | 145 | 77 | 67 | 74 | |
| Limits: | 29-147 | 28-143 | 26-138 | 17-157 | 24-169 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Qp# 1473052 Sample# 7457065

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/7/2014
CarrierName: FedEx
AirbillNo: 798788635154

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140507-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FDG-SL-798-SA5B-SB-0.0-0.5 | 5/7/14 12:29 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | |
| FDG-SL-798-SA5B-SB-0.0-0.5 | 5/7/14 12:29 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Heather Treadway

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stacy Myers | 05/07/14 | 1500 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/8/14 | 0720 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 13966

Group Number(s): 1473052

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/08/2014 9:20 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 0 |
| Custody Seal Present: | Yes | Trip Blank Type: | N/A |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:27 on 05/08/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | 3258-IR | 4.2 | IR | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 21, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/09/2014
Group Number: 1473208
SDG: PH173
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| EB-050814 Water | 7457968 |
| FDG-SL-511-SA5C-SB-0.0-0.5 Soil | 7457969 |
| FDG-SL-511-SA5C-SB-2.0-3.0 Soil | 7457970 |
| FDG-SL-749-SA5C-SB-0.0-0.5 Soil | 7457971 |
| FDG-SL-749-SA5C-SB-0.0-0.5MS Soil | 7457972 |
| FDG-SL-749-SA5C-SB-0.0-0.5MSD Soil | 7457973 |
| FDG-SL-749-SA5C-SB-0.0-0.5DUP Soil | 7457974 |
| FDG-SL-1049-SA5C-SB-0.0-0.5 Soil | 7457975 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: EB-050814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7457968**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 15:00

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB58- SDG#: PH173-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.016 | J | 0.051 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.021 | J | 0.051 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.16 | J | 1.0 | 0.051 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.48 | J | 1.0 | 0.051 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.051 | U | 0.051 | 0.031 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.051 | U | 0.051 | 0.031 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.051 | U | 0.051 | 0.010 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
bis(2-ethylhexyl)phthalate

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/l | | ug/l | ug/l | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.41 | U | 0.41 | 0.081 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.41 | U | 0.41 | 0.081 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.41 | U | 0.41 | 0.089 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.41 | U | 0.41 | 0.081 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.41 | U | 0.41 | 0.081 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.41 | U | 0.41 | 0.16 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-050814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7457968**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 15:00

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB58- SDG#: PH173-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | PCB-1242 | 53469-21-9 | 0.41 | U | 0.41 | 0.081 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.41 | U | 0.41 | 0.081 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.41 | U | 0.41 | 0.081 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.41 | U | 0.41 | 0.12 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.41 | U | 0.41 | 0.16 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.41 | U | 0.41 | 0.13 | 1 |
| | The recovery for a target analyte(s) and the surrogate in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: Sufficient sample was not available to repeat the analysis. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.49 | U | 0.49 | 0.098 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.49 | U | 0.49 | 0.098 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.0084 | J | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0013 | J | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 | U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 | U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 | U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 | U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 | U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 | U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 | U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 | U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0031 | J | 0.0400 | 0.0020 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-050814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7457968**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 15:00

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB58- SDG#: PH173-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.9 | 0.010 | 0.010 | 1 |
| | The sample was analyzed outside of the project-required holding time of 48 hours. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-050814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7457968**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 15:00

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB58- SDG#: PH173-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.94 | U | 1.94 | 0.241 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.70 | U | 9.70 | 0.178 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.146 | JQ | 9.70 | 0.142 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.70 | U | 9.70 | 0.154 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.70 | U | 9.70 | 0.144 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.216 | JBQ | 9.70 | 0.0954 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.06 | JBQ | 19.4 | 0.132 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.94 | U | 1.94 | 0.159 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.312 | JBQ | 9.70 | 0.0880 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 9.70 | U | 9.70 | 0.0788 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.131 | JBQ | 9.70 | 0.0872 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.146 | JBQ | 9.70 | 0.0839 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 9.70 | U | 9.70 | 0.0798 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.114 | JQ | 9.70 | 0.0799 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.224 | JB | 9.70 | 0.0496 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.205 | JB | 9.70 | 0.0554 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.824 | JB | 19.4 | 0.134 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00454 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 89 | 25 - 181 |
| 13C12-123478-HxCDD | 95 | 32 - 141 |
| 13C12-123678-HxCDD | 95 | 28 - 130 |
| 13C12-123789-HxCDD | 94 | 28 - 130 |
| 13C12-1234678-HpCDD | 98 | 23 - 140 |
| 13C12-OCDD | 97 | 17 - 157 |
| 13C12-2378-TCDF | 87 | 24 - 169 |
| 13C12-12378-PeCDF | 96 | 24 - 185 |
| 13C12-23478-PeCDF | 95 | 21 - 178 |
| 13C12-123478-HxCDF | 103 | 26 - 152 |
| 13C12-123678-HxCDF | 102 | 26 - 123 |
| 13C12-234678-HxCDF | 102 | 28 - 136 |
| 13C12-123789-HxCDF | 116 | 29 - 147 |
| 13C12-1234678-HpCDF | 105 | 28 - 143 |
| 13C12-1234789-HpCDF | 106 | 26 - 138 |
| 13C12-OCDF | 107 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-050814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7457968**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 15:00

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB58- SDG#: PH173-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-050814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7457968**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 15:00

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB58- SDG#: PH173-01EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14134WAE026 | 05/20/2014 15:03 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14134WAE026 | 05/14/2014 22:00 | Elaine F Stoltzfus | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14132A94A | 05/13/2014 13:32 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14132A94A | 05/13/2014 13:32 | Laura M Krieger | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141320020A | 05/16/2014 18:19 | Richard A Shober | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141340038A | 05/19/2014 00:38 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141340038A | 05/15/2014 16:00 | William H Saadeh | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141330017A | 05/14/2014 19:55 | Heather E Williams | 1 |
| 13205 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141330035A | 05/19/2014 17:14 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141330035A | 05/14/2014 06:30 | Kerrie A Freeburn | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141330017A | 05/14/2014 06:30 | Kerrie A Freeburn | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14133003 | 05/15/2014 07:48 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14133003 | 05/13/2014 11:15 | Robert Brown | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-050814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7457968**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 15:00

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB58- SDG#: PH173-01EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07070 | Titanium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:38 | Maria A Orrs | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141350639001B | 05/16/2014 19:34 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141350639001A | 05/16/2014 19:34 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141350639001A | 05/16/2014 19:34 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141350639001A | 05/16/2014 19:34 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141355713005 | 05/19/2014 08:16 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141350635001 | 05/16/2014 10:00 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141350639001 | 05/16/2014 09:15 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141355713005 | 05/16/2014 11:49 | Micaela L Dishong | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14132003101A | 05/12/2014 15:21 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-511-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457969**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 09:40 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH173-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 3.0 | | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 2.0 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 8.5 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 10 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 9.1 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 14 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 13 | J | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 4.6 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 5.7 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 11 | J | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 14 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 25 | | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 18 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 3.2 | | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 3.0 | | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 62 | | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 69 | | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 17 | | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 75 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 21 | | 1.8 | 0.72 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.4 | U | 5.4 | 2.3 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 19 | J | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 11 | J | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 11 | J | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | |
| 01643 | Aluminum | 7429-90-5 | 17,200 | | 42.3 | 7.63 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.23 | U | 4.23 | 0.783 | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.07 | | 4.23 | 0.740 | 1 |
| 06946 | Barium | 7440-39-3 | 108 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.814 | J | 1.06 | 0.0709 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457969**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 09:40 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH173-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 3.72 | J | 10.6 | 0.888 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.403 | J | 1.06 | 0.0804 | 1 |
| 01650 | Calcium | 7440-70-2 | 38,400 | | 21.2 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.7 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.39 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 25.5 | | 2.12 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 23,700 | | 42.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 18.4 | | 3.17 | 0.529 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.2 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,160 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 387 | | 1.06 | 0.0878 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.399 | J | 2.12 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 16.1 | | 2.12 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 373 | | 10.6 | 3.06 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,630 | | 106 | 8.82 | 1 |
| 01667 | Sodium | 7440-23-5 | 95.9 | J | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.04 | J | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 907 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 47.4 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 178 | | 4.23 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.76 | J | 5.29 | 0.888 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.270 | J | 0.423 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.137 | J | 0.212 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 58.4 | | 0.423 | 0.0719 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.250 | | 0.212 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0542 | | 0.0177 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.97 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-511-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457969**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 09:40 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH173-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.52 B | 1.06 | 0.201 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 11.8 B | 5.30 | 0.278 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 26.0 | 5.30 | 0.153 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 126 B | 5.30 | 0.153 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 52.2 B | 5.30 | 0.149 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2,670 EB | 5.30 | 0.283 | 1 |
| 11031 | OCDD | 3268-87-9 | 26,100 EB | 10.6 | 0.171 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.630 J | 1.06 | 0.146 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.75 JB | 5.30 | 0.0897 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 3.07 JB | 5.30 | 0.0814 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 6.99 | 5.30 | 0.133 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 10.1 | 5.30 | 0.136 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.30 U | 5.30 | 0.129 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 21.7 | 5.30 | 0.129 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 282 B | 5.30 | 0.110 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 25.5 B | 5.30 | 0.140 | 1 |
| 11031 | OCDF | 39001-02-0 | 584 B | 10.6 | 0.0757 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 76.6 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 94 | 23 - 140 |
| 13C12-OCDD | 110 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 80 | 21 - 178 |
| 13C12-123478-HxCDF | 80 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457969**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 09:40 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH173-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Labeled Compounds** | | %Rec | Windows | | | |
| | 13C12-234678-HxCDF | 82 | 28 - 136 | | | |
| | 13C12-123789-HxCDF | 92 | 29 - 147 | | | |
| | 13C12-1234678-HpCDF | 84 | 28 - 143 | | | |
| | 13C12-1234789-HpCDF | 76 | 26 - 138 | | | |
| | 13C12-OCDF | 71 | 17 - 157 | | | |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*
*S Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457969**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 09:40 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH173-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 07:34 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14133SLF026 | 05/13/2014 21:30 | Karen L Beyer | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 15:08 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141330006A | 05/18/2014 21:15 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141330006A | 05/13/2014 14:30 | Kelli M Barto | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 2 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14134003 | 05/16/2014 01:13 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14134003 | 05/14/2014 13:40 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:00 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:15 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:15 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:15 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:15 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457969**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 09:40 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51100 SDG#: PH173-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 08:57 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14129039401A | 05/09/2014 21:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-511-SA5C-SB-2.0-3.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457970**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 11:05 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51123 SDG#: PH173-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.4 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.0 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 3.6 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 5.8 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 6.7 | J | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.1 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.4 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 5.9 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.0 | J | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.1 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.88 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 2.8 | | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.4 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.69 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 11 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.0 | | 1.7 | 0.69 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 8,420 | | 40.8 | 7.36 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.08 | U | 4.08 | 0.755 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.58 | | 4.08 | 0.714 | 1 |
| 06946 | Barium | 7440-39-3 | 61.1 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.400 | J | 1.02 | 0.0684 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457970**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 11:05 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51123 SDG#: PH173-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 1.16 | J | 10.2 | 0.857 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.247 | J | 1.02 | 0.0775 | 1 |
| 01650 | Calcium | 7440-70-2 | 17,600 | | 20.4 | 3.41 | 1 |
| 06951 | Chromium | 7440-47-3 | 11.9 | | 3.06 | 0.163 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.57 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 10.2 | | 2.04 | 0.296 | 1 |
| 01654 | Iron | 7439-89-6 | 12,400 | | 40.8 | 3.69 | 1 |
| 06955 | Lead | 7439-92-1 | 13.0 | | 3.06 | 0.510 | 1 |
| 01656 | Lithium | 7439-93-2 | 11.3 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,350 | | 10.2 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 377 | | 1.02 | 0.0847 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.209 | J | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.8 | | 2.04 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 210 | | 10.2 | 2.95 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,290 | | 102 | 8.51 | 1 |
| 01667 | Sodium | 7440-23-5 | 64.9 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.38 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 535 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.3 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 90.6 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.15 | J | 5.10 | 0.857 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.127 | J | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0375 | J | 0.204 | 0.0265 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.7 | | 0.408 | 0.0694 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.126 | J | 0.204 | 0.0306 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0170 | | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.93 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 23.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457970**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 11:05 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51123 SDG#: PH173-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.353 JBQ | 1.01 | 0.127 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.52 JB | 5.04 | 0.236 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 10.7 | 5.04 | 0.123 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 54.7 B | 5.04 | 0.123 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 21.9 B | 5.04 | 0.125 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1,210 B | 5.04 | 0.228 | 1 |
| 11031 | OCDD | 3268-87-9 | 10,200 EB | 10.1 | 0.138 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.264 J | 1.01 | 0.101 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.761 JB | 5.04 | 0.0713 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.50 JB | 5.04 | 0.0672 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 3.42 J | 5.04 | 0.103 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 4.44 J | 5.04 | 0.0971 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.04 U | 5.04 | 0.0948 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 9.77 | 5.04 | 0.0970 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 137 B | 5.04 | 0.0789 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 11.7 B | 5.04 | 0.0850 | 1 |
| 11031 | OCDF | 39001-02-0 | 257 B | 10.1 | 0.0625 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 32.2 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 88 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 95 | 23 - 140 |
| 13C12-OCDD | 103 | 17 - 157 |
| 13C12-2378-TCDF | 81 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 81 | 21 - 178 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457970**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 11:05 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51123 SDG#: PH173-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 94 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 93 | 26 - 138 |
| 13C12-OCDF | 81 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457970**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 11:05 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51123 SDG#: PH173-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 08:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14133SLF026 | 05/13/2014 21:30 | Karen L Beyer | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 15:21 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141330006A | 05/18/2014 21:33 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141330006A | 05/13/2014 14:30 | Kelli M Barto | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 2 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14134003 | 05/16/2014 02:10 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14134003 | 05/14/2014 13:40 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:12 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:22 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:22 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:22 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:22 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-511-SA5C-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457970**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 11:05 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51123 SDG#: PH173-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 08:59 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14129039401A | 05/09/2014 21:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-749-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457971**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 2.0 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.2 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.89 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.0 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 6.8 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.3 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 4.1 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 3.4 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 9.3 | J | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 8.6 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.1 | | 1.7 | 0.70 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,700 | | 40.5 | 7.30 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.05 | U | 4.05 | 0.749 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.70 | | 4.05 | 0.709 | 1 |
| 06946 | Barium | 7440-39-3 | 74.6 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.572 | J | 1.01 | 0.0678 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457971**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 1.77 | J | 10.1 | 0.850 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.01 | U | 1.01 | 0.0769 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,330 | | 20.2 | 3.38 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.7 | | 3.04 | 0.162 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.98 | | 1.01 | 0.100 | 1 |
| 06953 | Copper | 7440-50-8 | 11.8 | | 2.02 | 0.294 | 1 |
| 01654 | Iron | 7439-89-6 | 19,700 | | 40.5 | 3.66 | 1 |
| 06955 | Lead | 7439-92-1 | 8.82 | | 3.04 | 0.506 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.7 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,070 | | 10.1 | 1.69 | 1 |
| 06958 | Manganese | 7439-96-5 | 304 | | 1.01 | 0.0840 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.442 | J | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.4 | | 2.02 | 0.132 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 274 | | 10.1 | 2.93 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,330 | | 101 | 8.44 | 1 |
| 01667 | Sodium | 7440-23-5 | 88.5 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.99 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 972 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.3 | | 1.01 | 0.132 | 1 |
| 06972 | Zinc | 7440-66-6 | 75.8 | | 4.05 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.11 | J | 5.06 | 0.850 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.152 | J | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0300 | J | 0.202 | 0.0263 | 2 |
| 06144 | Strontium | 7440-24-6 | 28.7 | | 0.405 | 0.0688 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.276 | | 0.202 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0139 | J | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.17 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 23.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-749-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457971**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.176 | JB | 1.04 | 0.104 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 1.87 | JB | 5.20 | 0.162 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 3.04 | J | 5.20 | 0.106 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 22.1 | B | 5.20 | 0.104 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 8.42 | B | 5.20 | 0.102 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 572 | B | 5.20 | 0.137 | 1 |
| 11031 | OCDD | 3268-87-9 | 3,460 | B | 10.4 | 0.0854 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.150 | JQ | 1.04 | 0.0612 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.388 | JBQ | 5.20 | 0.0468 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.460 | JBQ | 5.20 | 0.0422 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.945 | J | 5.20 | 0.0755 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.11 | JQ | 5.20 | 0.0702 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.322 | JBQ | 5.20 | 0.0749 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.84 | J | 5.20 | 0.0698 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 29.6 | B | 5.20 | 0.0637 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.47 | JB | 5.20 | 0.0724 | 1 |
| 11031 | OCDF | 39001-02-0 | 66.6 | B | 10.4 | 0.0480 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 12.8 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 79 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 88 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 80 | 26 - 138 |
| 13C12-OCDF | 70 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457971**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457971**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 04:56 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14133SLF026 | 05/13/2014 21:30 | Karen L Beyer | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 15:33 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141330006A | 05/18/2014 21:52 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141330006A | 05/13/2014 14:30 | Kelli M Barto | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 2 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14134003 | 05/16/2014 03:07 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14134003 | 05/14/2014 13:40 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:32 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 04:59 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 04:59 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 04:59 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 04:59 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457971**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:01 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14129039401A | 05/09/2014 21:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-749-SA5C-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457972**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 37 | | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 34 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 38 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 34 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 38 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 30 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 29 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 41 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 36 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 34 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 32 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 33 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 47 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 34 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 41 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 40 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 32 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 29 | | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 43 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 62 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 35 | | 1.7 | 0.70 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 110 | | 5.3 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 160 | | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 170 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | |
| 01643 | Aluminum | 7429-90-5 | 19,900 | | 41.3 | 7.44 | 1 |
| 06944 | Antimony | 7440-36-0 | 24.4 | | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 21.8 | | 4.13 | 0.722 | 1 |
| 06946 | Barium | 7440-39-3 | 291 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.91 | | 1.03 | 0.0691 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457972**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 205 | 10.3 | 0.867 | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.91 | 1.03 | 0.0784 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,850 | 20.6 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 42.9 | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 55.6 | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 42.7 | 2.06 | 0.299 | 1 |
| 01654 | Iron | 7439-89-6 | 22,800 | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 25.3 | 3.10 | 0.516 | 1 |
| 01656 | Lithium | 7439-93-2 | 130 | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,030 | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 406 | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 188 | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 63.6 | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 402 | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,930 | 103 | 8.61 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,100 | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 352 | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,350 | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 96.4 | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 159 | 4.13 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 104 | 5.16 | 0.867 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.23 | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 10.8 | 0.206 | 0.0268 | 2 |
| 06144 | Strontium | 7440-24-6 | 46.9 | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.754 | 0.206 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.185 | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 5.0 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-749-SA5C-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457972**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.6 | B | 1.03 | 0.102 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 95.4 | B | 5.16 | 0.175 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 102 | | 5.16 | 0.141 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 116 | B | 5.16 | 0.138 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 103 | B | 5.16 | 0.128 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1,010 | B | 5.16 | 0.194 | 1 |
| 11031 | OCDD | 3268-87-9 | 3,990 | B | 10.3 | 0.110 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 19.7 | | 1.03 | 0.0605 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 97.8 | B | 5.16 | 0.0592 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 99.0 | B | 5.16 | 0.0559 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 98.4 | | 5.16 | 0.0958 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 99.2 | | 5.16 | 0.0884 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 96.5 | B | 5.16 | 0.0948 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 100 | | 5.16 | 0.0861 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 130 | B | 5.16 | 0.0799 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 98.3 | B | 5.16 | 0.0976 | 1 |
| 11031 | OCDF | 39001-02-0 | 280 | B | 10.3 | 0.0672 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 79 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 85 | 23 - 140 |
| 13C12-OCDD | 88 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 78 | 29 - 147 |
| 13C12-1234678-HpCDF | 87 | 28 - 143 |
| 13C12-1234789-HpCDF | 76 | 26 - 138 |
| 13C12-OCDF | 64 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457972**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457972**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 05:28 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14133SLF026 | 05/13/2014 21:30 | Karen L Beyer | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 15:46 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141330006A | 05/18/2014 22:10 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141330006A | 05/13/2014 14:30 | Kelli M Barto | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 2 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14134003 | 05/16/2014 04:03 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14134003 | 05/14/2014 13:40 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:44 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:06 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:06 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:06 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:06 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457972**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:07 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-749-SA5C-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457973**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 42 | | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 40 | | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 47 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 49 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 42 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 44 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 34 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 26 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 37 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 43 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 43 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 45 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 27 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 36 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 40 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 70 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 53 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 34 | | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 29 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 90 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 80 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 49 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 32 | | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 44 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 150 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 53 | | 1.7 | 0.70 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 120 | | 5.3 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 150 | | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 170 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | mg/kg | | mg/kg | mg/kg | |
| 01643 | Aluminum | 7429-90-5 | 19,600 | | 41.3 | 7.44 | 1 |
| 06944 | Antimony | 7440-36-0 | 23.4 | | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 22.1 | | 4.13 | 0.722 | 1 |
| 06946 | Barium | 7440-39-3 | 294 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.94 | | 1.03 | 0.0691 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-749-SA5C-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457973**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 209 | 10.3 | 0.867 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.07 | 1.03 | 0.0784 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,830 | 20.6 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 43.1 | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 53.5 | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 46.9 | 2.06 | 0.299 | 1 |
| 01654 | Iron | 7439-89-6 | 23,000 | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 26.6 | 3.10 | 0.516 | 1 |
| 01656 | Lithium | 7439-93-2 | 130 | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,980 | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 353 | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 188 | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 66.1 | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 432 | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,870 | 103 | 8.61 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,110 | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 354 | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,360 | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 97.2 | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 198 | 4.13 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 104 | 5.16 | 0.867 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.45 | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 10.5 | 0.206 | 0.0268 | 2 |
| 06144 | Strontium | 7440-24-6 | 43.9 | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.698 | 0.206 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.184 | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 5.0 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-749-SA5C-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457973**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.4 | B | 1.04 | 0.124 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 99.7 | B | 5.19 | 0.197 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 105 | | 5.19 | 0.136 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 140 | B | 5.19 | 0.134 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 115 | B | 5.19 | 0.135 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1,250 | B | 5.19 | 0.230 | 1 |
| 11031 | OCDD | 3268-87-9 | 7,280 | EB | 10.4 | 0.119 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.8 | | 1.04 | 0.0953 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 98.5 | B | 5.19 | 0.0604 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 99.9 | B | 5.19 | 0.0560 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 99.2 | | 5.19 | 0.108 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 102 | | 5.19 | 0.101 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 97.0 | B | 5.19 | 0.0941 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 103 | | 5.19 | 0.0973 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 176 | B | 5.19 | 0.0804 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 99.5 | B | 5.19 | 0.103 | 1 |
| 11031 | OCDF | 39001-02-0 | 384 | B | 10.4 | 0.0625 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 73 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457973**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457973**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 05:59 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14133SLF026 | 05/13/2014 21:30 | Karen L Beyer | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 15:59 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141330006A | 05/18/2014 22:29 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141330006A | 05/13/2014 14:30 | Kelli M Barto | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 2 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14134003 | 05/16/2014 08:03 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14134003 | 05/14/2014 13:40 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:48 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:08 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:08 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:08 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:08 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457973**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:09 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457974**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,200 | | 40.9 | 7.37 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.09 | U | 4.09 | 0.756 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.95 | | 4.09 | 0.715 | 1 |
| 06946 | Barium | 7440-39-3 | 68.0 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.547 | J | 1.02 | 0.0685 | 1 |
| 07914 | Boron | 7440-42-8 | 1.49 | J | 10.2 | 0.858 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.02 | U | 1.02 | 0.0777 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,930 | | 20.4 | 3.41 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.6 | | 3.07 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.75 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 11.5 | | 2.04 | 0.296 | 1 |
| 01654 | Iron | 7439-89-6 | 18,700 | | 40.9 | 3.70 | 1 |
| 06955 | Lead | 7439-92-1 | 8.19 | | 3.07 | 0.511 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.3 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,940 | | 10.2 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 237 | | 1.02 | 0.0848 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.225 | J | 2.04 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.6 | | 2.04 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 272 | | 10.2 | 2.95 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,240 | | 102 | 8.52 | 1 |
| 01667 | Sodium | 7440-23-5 | 84.6 | J | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.75 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 932 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.8 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 73.8 | | 4.09 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.37 | J | 5.11 | 0.858 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.167 | J | 0.409 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0280 | J | 0.204 | 0.0266 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.7 | | 0.409 | 0.0695 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.237 | | 0.204 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0156 | J | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.20 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 23.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 5.0 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 5.0 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-749-SA5C-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457974**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 13:30 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

74900 SDG#: PH173-04DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 20:40 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:04 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:04 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:04 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:04 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:05 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14129039401A | 05/09/2014 21:10 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-1049-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457975**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 14:00 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

1049- SDG#: PH173-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.1 | J | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.95 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 7.1 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.46 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.8 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.80 | J | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 9.7 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.2 | J | 1.7 | 0.70 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,800 | | 41.5 | 7.48 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.15 | U | 4.15 | 0.768 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.95 | | 4.15 | 0.726 | 1 |
| 06946 | Barium | 7440-39-3 | 70.2 | | 1.04 | 0.0342 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.562 | J | 1.04 | 0.0695 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-1049-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7457975**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 14:00 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

1049- SDG#: PH173-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 1.59 | J | 10.4 | 0.871 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.04 | U | 1.04 | 0.0788 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,940 | | 20.7 | 3.47 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.1 | | 3.11 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.87 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 10.6 | | 2.07 | 0.301 | 1 |
| 01654 | Iron | 7439-89-6 | 18,100 | | 41.5 | 3.76 | 1 |
| 06955 | Lead | 7439-92-1 | 7.07 | | 3.11 | 0.519 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.9 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,830 | | 10.4 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 256 | | 1.04 | 0.0861 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.07 | U | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.4 | | 2.07 | 0.135 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 259 | | 10.4 | 3.00 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,160 | | 104 | 8.65 | 1 |
| 01667 | Sodium | 7440-23-5 | 76.4 | J | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.73 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 925 | | 1.04 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.9 | | 1.04 | 0.135 | 1 |
| 06972 | Zinc | 7440-66-6 | 49.7 | | 4.15 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.13 | J | 5.19 | 0.871 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.160 | J | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0444 | J | 0.207 | 0.0270 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.3 | | 0.415 | 0.0705 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.248 | | 0.207 | 0.0311 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0170 | U | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.15 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 23.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-1049-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457975**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 14:00 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

1049- SDG#: PH173-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0604 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.131 | JB | 5.22 | 0.0801 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.202 | J | 5.22 | 0.0686 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.758 | JB | 5.22 | 0.0697 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.567 | JB | 5.22 | 0.0704 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 24.2 | B | 5.22 | 0.0709 | 1 |
| 11031 | OCDD | 3268-87-9 | 161 | B | 10.4 | 0.0632 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 | U | 1.04 | 0.0394 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0849 | JBQ | 5.22 | 0.0307 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.241 | JB | 5.22 | 0.0285 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.133 | J | 5.22 | 0.0515 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.272 | JQ | 5.22 | 0.0491 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.138 | JBQ | 5.22 | 0.0572 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.363 | JQ | 5.22 | 0.0495 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.75 | JB | 5.22 | 0.0271 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.483 | JB | 5.22 | 0.0371 | 1 |
| 11031 | OCDF | 39001-02-0 | 6.53 | JB | 10.4 | 0.0471 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.694 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 62 | 25 - 164 |
| 13C12-12378-PeCDD | 66 | 25 - 181 |
| 13C12-123478-HxCDD | 68 | 32 - 141 |
| 13C12-123678-HxCDD | 67 | 28 - 130 |
| 13C12-123789-HxCDD | 68 | 28 - 130 |
| 13C12-1234678-HpCDD | 68 | 23 - 140 |
| 13C12-OCDD | 63 | 17 - 157 |
| 13C12-2378-TCDF | 59 | 24 - 169 |
| 13C12-12378-PeCDF | 62 | 24 - 185 |
| 13C12-23478-PeCDF | 59 | 21 - 178 |
| 13C12-123478-HxCDF | 62 | 26 - 152 |
| 13C12-123678-HxCDF | 65 | 26 - 123 |
| 13C12-234678-HxCDF | 64 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 74 | 28 - 143 |
| 13C12-1234789-HpCDF | 62 | 26 - 138 |
| 13C12-OCDF | 49 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-1049-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457975**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 14:00 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

1049- SDG#: PH173-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-1049-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457975**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 14:00 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

1049- SDG#: PH173-05*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14133SLF026 | 05/20/2014 07:02 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14133SLF026 | 05/13/2014 21:30 | Karen L Beyer | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 16:12 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141330006A | 05/18/2014 22:47 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141330006A | 05/13/2014 14:30 | Kelli M Barto | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 2 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14134003 | 05/16/2014 09:00 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14134003 | 05/14/2014 13:40 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:16 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:24 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:24 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:24 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:24 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-1049-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7457975**
**LL Group # 1473208**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/08/2014 14:00 by WT

Submitted: 05/09/2014 09:15
Reported: 05/21/2014 16:47

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

1049- SDG#: PH173-05*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:15 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14129039401A | 05/09/2014 21:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14133SLF026 | Sample number(s): 7457969-7457973,7457975 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 91 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 116 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 121 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 124 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 80-119 | | |
| Batch number: 14134WAE026 | Sample number(s): 7457968 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 115 | 114 | 83-119 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 106 | 81-130 | 1 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 110 | 83-125 | 1 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 103 | 79-122 | 1 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 108 | 80-121 | 0 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 120 | 118 | 79-136 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 108 | 67-118 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 106 | 72-132 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 109 | 81-131 | 1 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 96 | 95 | 40-138 | 2 | 30 |
| Di-n-butylphthalate | 0.064 | J | 1.0 | 0.050 | ug/l | 105 | 104 | 64-141 | 2 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 107 | 84-118 | 0 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 94 | 96 | 66-133 | 2 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 109 | 110 | 64-137 | 1 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 109 | 109 | 23-139 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 0.075 | J | 1.0 | 0.050 | ug/l | 58* | 80 | 70-143 | 33* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 101 | 84-124 | 0 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 106 | 106 | 82-119 | 0 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 99 | 68-132 | 1 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 101 | 86-130 | 1 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 97 | 98 | 81-131 | 0 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 103 | 103 | 82-122 | 1 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 76 | 77 | 56-96 | 1 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 58 | 67 | 57-145 | 14 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 104 | 103 | 83-116 | 0 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 107 | 78-125 | 1 | 30 |
| Batch number: 14132A94A | Sample number(s): 7457968 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 107 | 98 | 80-133 | 8 | 30 |
| Batch number: 141320020A | Sample number(s): 7457968 | | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 | U | 1.0 | 0.20 | ug/l | 102 | | 85-115 | | |
| Batch number: 141360001A | Sample number(s): 7457969-7457973,7457975 | | | | | | | | | |
| 6a Perchlorate (Method 6850) | 5.0 | U | 5.0 | 2.1 | ug/kg | 105 | | 85-115 | | |
| Batch number: 141330006A | Sample number(s): 7457969-7457973,7457975 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 83 | 85 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 94 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 99 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141340038A | Sample number(s): 7457968 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 69 | 63 | 34-115 | 9 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 69 | 85 | 60-117 | 20 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 59* | 82 | 67-128 | 33* | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141330017A | Sample number(s): 7457968 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 86 | 79 | 67-109 | 9 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 91 | 83 | 71-119 | 9 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 83 | 75-117 | 8 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 59 | 57 | 44-134 | 5 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 73 | 67 | 55-86 | 10 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141330035A | Sample number(s): 7457968 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 77 | 80 | 67-109 | 3 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 81 | 85 | 71-119 | 5 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 81 | 85 | 75-117 | 5 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 65 | 68 | 44-134 | 5 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 58 | 59 | 55-86 | 2 | 30 |
| Batch number: 141340637004 | Sample number(s): 7457969-7457975 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 108 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 1.15 | J | 10.0 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 104 | | 80-120 | | |
| Calcium | 13.6 | J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 108 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 104 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.35 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 103 | | 80-120 | | |
| Zinc | 0.568 | J | 4.00 | 0.200 | mg/kg | 103 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141340637004A | Sample number(s): 7457969-7457975 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.0750 | J | 0.400 | 0.0680 | mg/kg | 100 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141340637004B | Sample number(s): 7457969-7457975 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 109 | | 80-120 | | |
| Batch number: 141350635001 | Sample number(s): 7457968 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 106 | 103 | 88-111 | 3 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 106 | 102 | 90-113 | 4 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 105 | 105 | 90-110 | 0 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 103 | 103 | 90-111 | 0 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 99 | 99 | 90-110 | 0 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 105 | 102 | 90-112 | 3 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 103 | 101 | 90-112 | 1 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 102 | 101 | 90-110 | 0 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 108 | 105 | 90-110 | 3 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 0.0200 U | 0.0200 | 0.0027 | mg/l | 107 | 107 | 90-112 | 0 | 20 |
| Iron | 0.400 U | 0.400 | 0.0430 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0047 | mg/l | 109 | 106 | 88-116 | 3 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0047 | mg/l | 103 | 103 | 90-110 | 1 | 20 |
| Magnesium | 0.200 U | 0.200 | 0.0167 | mg/l | 101 | 100 | 89-110 | 1 | 20 |
| Manganese | 0.0016 J | 0.0100 | 0.00083 | mg/l | 106 | 106 | 90-110 | 0 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0017 | mg/l | 106 | 103 | 90-110 | 3 | 20 |
| Nickel | 0.0200 U | 0.0200 | 0.0015 | mg/l | 111 | 108 | 90-111 | 3 | 20 |
| Phosphorus | 0.200 U | 0.200 | 0.0418 | mg/l | 103 | 101 | 90-110 | 2 | 20 |
| Potassium | 1.00 U | 1.00 | 0.0980 | mg/l | 101 | 100 | 90-110 | 0 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 103 | 102 | 87-114 | 1 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0029 | mg/l | 103 | 100 | 90-110 | 3 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 104 | 104 | 90-113 | 0 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0020 | mg/l | 105 | 104 | 90-110 | 1 | 20 |
| Zinc | 0.0038 J | 0.0400 | 0.0020 | mg/l | 105 | 102 | 90-110 | 3 | 20 |
| Zirconium | 0.100 U | 0.100 | 0.0084 | mg/l | 102 | 102 | 90-110 | 1 | 20 |
| Batch number: 141350638001 | Sample number(s): 7457969-7457975 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 91 | | 85-120 | | |
| Batch number: 141350639001A | Sample number(s): 7457968 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 102 | 101 | 90-115 | 1 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 101 | 99 | 90-110 | 2 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 107 | 102 | 90-115 | 4 | 20 |
| Batch number: 141350639001B | Sample number(s): 7457968 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 109 | 133* | 90-114 | 20 | 20 |
| Batch number: 141355713005 | Sample number(s): 7457968 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00006 0 | mg/l | 98 | 101 | 90-115 | 3 | 20 |
| Batch number: 14129039401A | Sample number(s): 7457969-7457971,7457974-7457975 | | | | | | | | |
| 15a pH by 9045D | | | | | 99 | | 95-105 | | |
| Batch number: 14132003101A | Sample number(s): 7457968 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 100 | | 90-110 | | |
| Batch number: 14136162401A | Sample number(s): 7457969-7457975 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14133003 | Sample number(s): 7457968 | | | | | | | | |
| 2378-TCDD | 2.00 U | 2.00 | 0.294 | pg/l | 104 | | 60-150 | | |
| 12378-PeCDD | 10.0 U | 10.0 | 0.223 | pg/l | 99 | | 60-150 | | |
| 123478-HxCDD | 10.0 U | 10.0 | 0.130 | pg/l | 97 | | 60-150 | | |
| 123678-HxCDD | 10.0 U | 10.0 | 0.136 | pg/l | 97 | | 60-150 | | |
| 123789-HxCDD | 10.0 U | 10.0 | 0.139 | pg/l | 100 | | 60-150 | | |
| 1234678-HpCDD | 0.535 J | 10.0 | 0.147 | pg/l | 97 | | 60-150 | | |
| OCDD | 1.07 J | 20.0 | 0.162 | pg/l | 94 | | 60-150 | | |
| 2378-TCDF | 2.00 U | 2.00 | 0.196 | pg/l | 97 | | 60-150 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 12378-PeCDF | 0.438 | J | 10.0 | 0.107 | pg/l | 97 | | 60-150 | | |
| 23478-PeCDF | 0.173 | J | 10.0 | 0.0973 | pg/l | 99 | | 60-150 | | |
| 123478-HxCDF | 0.329 | J | 10.0 | 0.0946 | pg/l | 99 | | 60-150 | | |
| 123678-HxCDF | 0.278 | J | 10.0 | 0.0941 | pg/l | 98 | | 60-150 | | |
| 123789-HxCDF | 0.306 | J | 10.0 | 0.0899 | pg/l | 97 | | 60-150 | | |
| 234678-HxCDF | 10.0 | U | 10.0 | 0.0870 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDF | 0.256 | J | 10.0 | 0.0641 | pg/l | 97 | | 60-150 | | |
| 1234789-HpCDF | 0.404 | J | 10.0 | 0.0769 | pg/l | 98 | | 60-150 | | |
| OCDF | 1.22 | J | 20.0 | 0.161 | pg/l | 99 | | 60-150 | | |
| Batch number: 14134003 | Sample number(s): 7457969-7457973,7457975 | | | | | | | | | |
| 2378-TCDD | 0.0966 | J | 1.00 | 0.0675 | ng/kg | 86 | | 67-158 | | |
| 12378-PeCDD | 0.0398 | J | 5.00 | 0.0371 | ng/kg | 90 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0233 | ng/kg | 95 | | 70-164 | | |
| 123678-HxCDD | 0.0254 | J | 5.00 | 0.0243 | ng/kg | 91 | | 76-134 | | |
| 123789-HxCDD | 0.0340 | J | 5.00 | 0.0225 | ng/kg | 91 | | 64-162 | | |
| 1234678-HpCDD | 0.0539 | J | 5.00 | 0.0298 | ng/kg | 88 | | 70-140 | | |
| OCDD | 0.208 | J | 10.0 | 0.0246 | ng/kg | 89 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0395 | ng/kg | 94 | | 75-158 | | |
| 12378-PeCDF | 0.0374 | J | 5.00 | 0.0228 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0307 | J | 5.00 | 0.0230 | ng/kg | 94 | | 68-160 | | |
| 123478-HxCDF | 5.00 | U | 5.00 | 0.0230 | ng/kg | 93 | | 72-134 | | |
| 123678-HxCDF | 5.00 | U | 5.00 | 0.0212 | ng/kg | 92 | | 84-130 | | |
| 123789-HxCDF | 0.0835 | J | 5.00 | 0.0214 | ng/kg | 93 | | 78-130 | | |
| 234678-HxCDF | 5.00 | U | 5.00 | 0.0227 | ng/kg | 92 | | 70-156 | | |
| 1234678-HpCDF | 0.0286 | J | 5.00 | 0.00941 | ng/kg | 91 | | 82-122 | | |
| 1234789-HpCDF | 0.0418 | J | 5.00 | 0.0148 | ng/kg | 90 | | 78-138 | | |
| OCDF | 0.129 | J | 10.0 | 0.0436 | ng/kg | 90 | | 63-170 | | |
| Batch number: 14133003 | Sample number(s): 7457968 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.000685 | | | | pg/l | | | | | |
| Batch number: 14134003 | Sample number(s): 7457969-7457973,7457975 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0497 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14133SLF026 | Sample number(s): 7457969-7457973,7457975 UNSPK: 7457971 | | | | | | | | |
| Acenaphthene | 107 | 119 | 48-127 | 11 | 30 | | | | |
| Acenaphthylene | 98 | 113 | 60-128 | 15 | 30 | | | | |
| Anthracene | 95 | 127* | 52-126 | 28 | 30 | | | | |
| Benzo(a)anthracene | 105 | 137 | 44-143 | 26 | 30 | | | | |
| Benzo(a)pyrene | 96 | 117 | 49-137 | 20 | 30 | | | | |
| Benzo(b)fluoranthene | 106 | 124 | 26-142 | 16 | 30 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(e)pyrene | 85 | 96 | 63-111 | 12 | 30 | | | | |
| Benzo(g,h,i)perylene | 84 | 75 | 33-141 | 12 | 30 | | | | |
| Benzo(k)fluoranthene | 89 | 106 | 49-144 | 18 | 30 | | | | |
| Butylbenzylphthalate | 97 | 105 | 64-156 | 7 | 30 | | | | |
| Di-n-butylphthalate | 104 | 122 | 52-147 | 16 | 30 | | | | |
| Chrysene | 95 | 125 | 43-141 | 27 | 30 | | | | |
| Dibenz(a,h)anthracene | 90 | 78 | 25-145 | 14 | 30 | | | | |
| Diethylphthalate | 91 | 102 | 66-140 | 12 | 30 | | | | |
| Dimethylphthalate | 94 | 116 | 70-123 | 21 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 166* | 48-164 | 39* | 30 | | | | |
| Fluoranthene | 93 | 145 | 38-153 | 42* | 30 | | | | |
| Fluorene | 88 | 99 | 57-130 | 12 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 89 | 82 | 26-139 | 8 | 30 | | | | |
| 1-Methylnaphthalene | 107 | 247* | 59-139 | 74* | 30 | | | | |
| 2-Methylnaphthalene | 104 | 219* | 46-147 | 67* | 30 | | | | |
| Naphthalene | 90 | 136 | 52-136 | 40* | 30 | | | | |
| N-Nitrosodimethylamine | 82 | 91 | 39-134 | 11 | 30 | | | | |
| Di-n-octylphthalate | 97 | 100 | 52-162 | 3 | 30 | | | | |
| Phenanthrene | 154* | 399* | 50-137 | 82* | 30 | | | | |
| Pyrene | 94 | 144* | 26-143 | 40* | 30 | | | | |
| Batch number: 141320020A | Sample number(s): 7457968 UNSPK: 7457968 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 104 | 99 | 80-120 | 4 | 20 | | | | |
| Batch number: 141360001A | Sample number(s): 7457969-7457973,7457975 UNSPK: 7457971 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 108 | 111 | 80-120 | 3 | 20 | | | | |
| Batch number: 141330006A | Sample number(s): 7457969-7457973,7457975 UNSPK: 7457971 | | | | | | | | |
| PCB-1016 | 89 | 88 | 41-135 | 2 | 50 | | | | |
| PCB-1260 | 98 | 97 | 40-134 | 0 | 50 | | | | |
| Batch number: 141340637004 | Sample number(s): 7457969-7457975 UNSPK: 7457971 BKG: 7457971 | | | | | | | | |
| Aluminum | 3014 (2) | 2861 (2) | 75-125 | 2 | 20 | 13,000 | 12,600 | 4 | 20 |
| Antimony | 47* | 45* | 75-125 | 4 | 20 | 3.85 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 104 | 106 | 75-125 | 2 | 20 | 5.42 | 5.66 | 4 (1) | 20 |
| Barium | 105 | 106 | 75-125 | 1 | 20 | 70.9 | 64.6 | 9 | 20 |
| Beryllium | 103 | 104 | 75-125 | 0 | 20 | 0.543 J | 0.519 J | 4 (1) | 20 |
| Boron | 99 | 101 | 75-125 | 2 | 20 | 1.68 J | 1.41 J | 17 (1) | 20 |
| Cadmium | 95 | 98 | 75-125 | 3 | 20 | 0.962 U | 0.971 U | 0 (1) | 20 |
| Calcium | 369 (2) | 365 (2) | 75-125 | 0 | 20 | 3,160 | 2,780 | 13 | 20 |
| Chromium | 127* | 128* | 75-125 | 1 | 20 | 15.8 | 15.8 | 0 | 20 |
| Cobalt | 98 | 94 | 75-125 | 4 | 20 | 4.73 | 4.51 | 5 (1) | 20 |
| Copper | 120 | 136* | 75-125 | 9 | 20 | 11.2 | 10.9 | 3 | 20 |
| Iron | 3011 (2) | 3164 (2) | 75-125 | 1 | 20 | 18,700 | 17,800 | 5 | 20 |
| Lead | 106 | 115 | 75-125 | 5 | 20 | 8.38 | 7.78 | 7 (1) | 20 |
| Lithium | 104 | 104 | 75-125 | 0 | 20 | 21.6 | 21.2 | 2 | 20 |
| Magnesium | 468 (2) | 442 (2) | 75-125 | 1 | 20 | 3,870 | 3,750 | 3 | 20 |
| Manganese | 198 (2) | 96 (2) | 75-125 | 14 | 20 | 288 | 226 | 24* | 20 |
| Molybdenum | 91 | 91 | 75-125 | 0 | 20 | 0.420 J | 0.214 J | 65* (1) | 20 |
| Nickel | 97 | 102 | 75-125 | 4 | 20 | 12.7 | 12.0 | 6 | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Phosphorus | 125 | 154* | 75-125 | 7 | 20 | 260 | 258 | 1 | 20 |
| Potassium | 155* | 150* | 75-125 | 1 | 20 | 2,210 | 2,130 | 4 | 20 |
| Sodium | 98 | 99 | 75-125 | 0 | 20 | 84.1 J | 80.3 J | 5 (1) | 20 |
| Tin | 85 | 85 | 75-125 | 0 | 20 | 2.84 J | 2.62 J | 8 (1) | 20 |
| Titanium | 363 (2) | 380 (2) | 75-125 | 1 | 20 | 923 | 886 | 4 | 20 |
| Vanadium | 116 | 118 | 75-125 | 1 | 20 | 34.5 | 33.0 | 4 | 20 |
| Zinc | 161* | 237* | 75-125 | 22* | 20 | 72.0 | 70.1 | 3 | 20 |
| Zirconium | 98 | 97 | 75-125 | 1 | 20 | 2.95 J | 3.20 J | 8 (1) | 20 |
| Batch number: 141340637004A | Sample number(s): 7457969-7457975 UNSPK: 7457971 BKG: 7457971 | | | | | | | | |
| Silver | 105 | 101 | 75-125 | 3 | 20 | 0.0285 J | 0.0266 J | 7 (1) | 20 |
| Strontium | 221* | 184* | 75-125 | 7 | 20 | 27.2 | 23.5 | 15 | 20 |
| Thallium | 116 | 102 | 75-125 | 8 | 20 | 0.262 | 0.225 | 15 (1) | 20 |
| Batch number: 141340637004B | Sample number(s): 7457969-7457975 UNSPK: 7457971 BKG: 7457971 | | | | | | | | |
| Selenium | 101 | 111 | 75-125 | 9 | 20 | 0.144 J | 0.159 J | 10 (1) | 20 |
| Batch number: 141350638001 | Sample number(s): 7457969-7457975 UNSPK: 7457971 BKG: 7457971 | | | | | | | | |
| 3a Mercury 7471A | 104 | 101 | 65-135 | 1 | 20 | 0.0132 J | 0.0148 J | 12 (1) | 20 |
| Batch number: 14129039401A | Sample number(s): 7457969-7457971,7457974-7457975 BKG: 7457971 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.17 | 8.20 | 0 | 3 |
| Batch number: 14132003101A | Sample number(s): 7457968 BKG: P459188 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 7.8 | 7.8 | 1 | 3 |
| Batch number: 14136162401A | Sample number(s): 7457969-7457975 BKG: 7457971 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 5.0 | 5.0 | 0 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 5.0 | 5.0 | 0 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 5.0 | 5.0 | 0 | 20 |
| Batch number: 14134003 | Sample number(s): 7457969-7457973,7457975 UNSPK: 7457971 | | | | | | | | |
| 2378-TCDD | 89 | 88 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 91 | 94 | 40-135 | 4 | 20 | | | | |
| 123478-HxCDD | 96 | 98 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 91 | 114 | 40-135 | 19 | 20 | | | | |
| 123789-HxCDD | 92 | 103 | 40-135 | 11 | 20 | | | | |
| 1234678-HpCDD | 429 (2) | 656 (2) | 40-135 | 21* | 20 | | | | |
| OCDD | 255 (2) | 1840 (2) | 40-135 | 58* | 20 | | | | |
| 2378-TCDF | 95 | 99 | 40-135 | 5 | 20 | | | | |
| 12378-PeCDF | 94 | 94 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 95 | 96 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 94 | 95 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 95 | 97 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDF | 93 | 93 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 95 | 98 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDF | 97 | 142* | 40-135 | 30* | 20 | | | | |
| 1234789-HpCDF | 93 | 93 | 40-135 | 1 | 20 | | | | |
| OCDF | 104 | 153* | 40-135 | 31* | 20 | | | | |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14133SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7457969 | 93 | 107 | 86 |
| 7457970 | 90 | 108 | 85 |
| 7457971 | 96 | 111 | 86 |
| 7457972 | 87 | 105 | 82 |
| 7457973 | 93 | 104 | 88 |
| 7457975 | 90 | 112 | 88 |
| Blank | 97 | 115 | 91 |
| LCS | 97 | 114 | 91 |
| MS | 87 | 105 | 82 |
| MSD | 93 | 104 | 88 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14134WAE026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7457968 | 96 | 96 | 94 |
| Blank | 99 | 120 | 91 |
| LCS | 103 | 126 | 98 |
| LCSD | 103 | 127 | 99 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14132A94A

| | Trifluorotoluene-F |
|---|---|
| 7457968 | 85 |
| Blank | 85 |
| LCS | 96 |
| LCSD | 92 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141330006A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7457969 | 89 | 93 |
| 7457970 | 103 | 105 |
| 7457971 | 105 | 103 |
| 7457972 | 97 | 105 |
| 7457973 | 98 | 108 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7457975 | 97 | 110 |
| Blank | 101 | 96 |
| LCS | 105 | 104 |
| LCSD | 110 | 115 |
| MS | 97 | 105 |
| MSD | 98 | 108 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141340038A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7457968 | 97 | 91 |
| Blank | 89 | 60 |
| LCS | 80 | 34* |
| LCSD | 97 | 60 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141330017A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7457968 | 68 | 86 |
| Blank | 88 | 93 |
| LCS | 94 | 87 |
| LCSD | 64 | 79 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141330035A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7457968 | 71 | 81 |
| Blank | 63 | 71 |
| LCS | 71 | 78 |
| LCSD | 72 | 82 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14133003

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7457968 | 83 | 89 | 95 | 95 | 94 | 98 |
| Blank | 74 | 80 | 89 | 91 | 89 | 94 |
| OPR | 75 | 84 | 85 | 86 | 84 | 90 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7457968 | 97 | 87 | 96 | 95 | 103 | 102 |
| Blank | 95 | 79 | 87 | 87 | 94 | 96 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| OPR | 95 | 80 | 90 | 89 | 88 | 89 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7457968 | 102 | 116 | 105 | 106 | 107 | |
| Blank | 95 | 105 | 103 | 99 | 96 | |
| OPR | 89 | 92 | 94 | 93 | 92 | |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14134003

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7457969 | 81 | 85 | 85 | 84 | 87 | 94 |
| 7457970 | 83 | 88 | 88 | 87 | 87 | 95 |
| 7457971 | 76 | 79 | 84 | 81 | 84 | 87 |
| 7457972 | 76 | 79 | 82 | 79 | 82 | 85 |
| 7457973 | 73 | 76 | 80 | 78 | 80 | 83 |
| 7457975 | 62 | 66 | 68 | 67 | 68 | 68 |
| Blank | 70 | 75 | 80 | 77 | 80 | 85 |
| MS | 76 | 79 | 82 | 79 | 82 | 85 |
| MSD | 73 | 76 | 80 | 78 | 80 | 83 |
| OPR | 71 | 81 | 80 | 79 | 82 | 89 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |
| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
| 7457969 | 110 | 79 | 80 | 80 | 80 | 79 |
| 7457970 | 103 | 81 | 82 | 81 | 82 | 83 |
| 7457971 | 88 | 72 | 75 | 74 | 75 | 78 |
| 7457972 | 88 | 74 | 76 | 72 | 75 | 77 |
| 7457973 | 85 | 69 | 73 | 71 | 72 | 73 |
| 7457975 | 63 | 59 | 62 | 59 | 62 | 65 |
| Blank | 78 | 65 | 72 | 66 | 69 | 73 |
| MS | 88 | 74 | 76 | 72 | 75 | 77 |
| MSD | 85 | 69 | 73 | 71 | 72 | 73 |
| OPR | 86 | 67 | 74 | 74 | 71 | 75 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7457969 | 82 | 92 | 84 | 76 | 71 | |
| 7457970 | 84 | 94 | 88 | 93 | 81 | |
| 7457971 | 78 | 79 | 86 | 80 | 70 | |
| 7457972 | 77 | 78 | 87 | 76 | 64 | |
| 7457973 | 75 | 84 | 80 | 70 | 61 | |
| 7457975 | 64 | 62 | 74 | 62 | 49 | |
| Blank | 72 | 81 | 92 | 66 | 58 | |
| MS | 77 | 78 | 87 | 76 | 64 | |
| MSD | 75 | 84 | 80 | 70 | 61 | |
| OPR | 75 | 82 | 90 | 74 | 69 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473208
Reported: 05/21/14 at 04:47 PM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

A-13013
G-1473208
S-745796B-75

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/8/2014
CarrierName: FedEx
AirbillNo: 801785869961

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140508-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-050814 | 5/8/14 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-050814 | 5/8/14 15:00 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-050814 | 5/8/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-050814 | 5/8/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB-050814 | 5/8/14 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | For EFH, silica gel cleanup requi |
| EB-050814 | 5/8/14 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | on 1/2 the extract. Analyze bot |
| EB-050814 | 5/8/14 15:00 | WQ | None | 1 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | extracts for EFH. |

Special Instructions:

Sampler: P. Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stephen Myers | 05/08/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/9/14 | 0915 |

# SSFL Phase 3 Chain of Custody

**CDM Smith** A-13013

DateShipped: 5/8/2014 G-1473208

CarrierName: FedEx S-7457968-75

AirbillNo: 801785869961

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140508-02

Cooler #: 2

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FDG-SL-511-SA5C-SB-0.0-0.5 | 5/8/14 09:40 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-511-SA5C-SB-0.0-0.5 | 5/8/14 09:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-511-SA5C-SB-2.0-3.0 | 5/8/14 11:05 | SO | None | 1 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-511-SA5C-SB-2.0-3.0 | 5/8/14 11:05 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-511-SA5C-SB-2.0-3.0 | 5/8/14 11:05 | SO | None | 1 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-749-SA5C-SB-0.0-0.5MS | 5/8/14 13:30 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | MS/MSD |
| FDG-SL-749-SA5C-SB-0.0-0.5MS | 5/8/14 13:30 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | MS/MSD |
| FDG-SL-1049-SA5C-SB-0.0-0.5 | 5/8/14 14:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-1049-SA5C-SB-0.0-0.5 | 5/8/14 14:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Whitney Treadway

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steff Myers | 05/08/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/9/14 | 0915 |

COC Rev 2

COC: 20140508-02, Page 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14075

Group Number(s): 473208

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/09/2014 9:15 |
| Number of Packages: | 2 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 0 |
| Custody Seal Present: | Yes | Trip Blank Type: | N/A |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 10:40 on 05/09/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 0.9 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 27, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/13/2014
Group Number: 1473877
SDG: PH174
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB-051214 Water | 7461252 |
| SVL-501-SA5B-SB-0.75-1.25 Soil | 7461253 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB-051214 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7461252**
**LL Group # 1473877**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:00

Submitted: 05/13/2014 09:25
Reported: 05/27/2014 14:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

501TB SDG#: PH174-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-051214 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7461252**
**LL Group # 1473877**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:00

Submitted: 05/13/2014 09:25
Reported: 05/27/2014 14:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

501TB SDG#: PH174-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141392AA | 05/19/2014 23:20 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141392AA | 05/19/2014 23:20 | Kevin A Sposito | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-501-SA5B-SB-0.75-1.25 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7461253**
**LL Group # 1473877**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 14:50 by RE

Submitted: 05/13/2014 09:25
Reported: 05/27/2014 14:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50175 SDG#: PH174-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 18 | U | 18 | 6 | 0.81 |
| 10237 | Acrolein | 107-02-8 | 89 | U | 89 | 18 | 0.81 |
| 10237 | Acrylonitrile | 107-13-1 | 18 | U | 18 | 4 | 0.81 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Benzene | 71-43-2 | 4 | U | 4 | 0.4 | 0.81 |
| 10237 | Bromobenzene | 108-86-1 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Bromochloromethane | 74-97-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Bromodichloromethane | 75-27-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Bromoform | 75-25-2 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Bromomethane | 74-83-9 | 4 | U | 4 | 2 | 0.81 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.81 |
| 10237 | t-Butyl alcohol | 75-65-0 | 44 | U | 44 | 18 | 0.81 |
| 10237 | n-Butylbenzene | 104-51-8 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | sec-Butylbenzene | 135-98-8 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | tert-Butylbenzene | 98-06-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Carbon Disulfide | 75-15-0 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Chlorobenzene | 108-90-7 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Chloroethane | 75-00-3 | 4 | U | 4 | 2 | 0.81 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.81 |
| 10237 | Chloroform | 67-66-3 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1-Chlorohexane | 544-10-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Chloromethane | 74-87-3 | 4 | U | 4 | 2 | 0.81 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 4 | U | 4 | 2 | 0.81 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 4 | U | 4 | 2 | 0.81 |
| 10237 | Dibromochloromethane | 124-48-1 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Dibromomethane | 74-95-3 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 4 | U | 4 | 2 | 0.81 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Ethylbenzene | 100-41-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Freon 113 | 76-13-1 | 4 | U | 4 | 2 | 0.81 |
| 10237 | Freon 133a | 75-88-7 | 4 | U | 4 | 2 | 0.81 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 4 | U | 4 | 2 | 0.81 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.81 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-501-SA5B-SB-0.75-1.25 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7461253**
**LL Group # 1473877**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 14:50 by RE

Submitted: 05/13/2014 09:25
Reported: 05/27/2014 14:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50175 SDG#: PH174-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Isopropylbenzene | 98-82-8 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Methyl Iodide | 74-88-4 | 4 | U | 4 | 3 | 0.81 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 4 | U | 4 | 0.4 | 0.81 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.81 |
| 10237 | Methylene Chloride | 75-09-2 | 4 | U | 4 | 2 | 0.81 |
| 10237 | n-Propylbenzene | 103-65-1 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Styrene | 100-42-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Tetrachloroethene | 127-18-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Toluene | 108-88-3 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Trichloroethene | 79-01-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 4 | U | 4 | 2 | 0.81 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.81 |
| 10237 | Vinyl Chloride | 75-01-4 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | m+p-Xylene | 179601-23-1 | 4 | U | 4 | 0.9 | 0.81 |
| 10237 | o-Xylene | 95-47-6 | 4 | U | 4 | 0.9 | 0.81 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 17:41 | Christopher G Torres | 0.81 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 1 | 201413334483 | 05/13/2014 16:21 | Lois E Hiltz | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-501-SA5B-SB-0.75-1.25 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7461253**
**LL Group # 1473877**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 14:50 by RE

Submitted: 05/13/2014 09:25
Reported: 05/27/2014 14:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50175 SDG#: PH174-02*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 2 | 201413334483 | 05/13/2014 16:21 | Lois E Hiltz | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035 | 1 | 201413334483 | 05/13/2014 16:18 | Lois E Hiltz | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473877
Reported: 05/27/14 at 02:36 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7461253 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 98 | | 41-149 | | |
| Acrolein | 100 U | 100. | 20 | ug/kg | 79 | | 50-137 | | |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 87 | | 58-123 | | |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 92 | | 63-130 | | |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 97 | | 80-120 | | |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 105 | | 78-120 | | |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 121 | | 75-129 | | |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 U | 5. | 1 | ug/kg | 107 | | 70-126 | | |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 109 | | 32-162 | | |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 94 | | 47-136 | | |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 118 | | 66-133 | | |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | | 69-120 | | |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 95 | | 75-120 | | |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 90 | | 63-128 | | |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 113 | | 69-130 | | |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 102 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 83 | | 52-134 | | |
| Chloroform | 5 U | 5. | 1 | ug/kg | 113 | | 80-120 | | |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 93 | | 70-130 | | |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 89 | | 56-120 | | |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 98 | | 79-120 | | |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 64 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 90 | | 50-132 | | |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 104 | | 77-120 | | |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 101 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 96 | | 26-137 | | |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 101 | | 71-122 | | |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 120 | | 66-136 | | |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 109 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | | 79-120 | | |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 92 | | 77-120 | | |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 97 | | 73-120 | | |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 95 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473877
Reported: 05/27/14 at 02:36 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 91 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 90 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 97 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 98 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 118 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 93 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 92 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 116 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 102 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 85 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 105 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 106 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 91 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 96 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 100 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 105 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 105 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 71 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Batch number: Y141392AA | Sample number(s): 7461252 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 84 | 84 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 87 | 87 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 85 | 88 | 62-120 | 4 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 103 | 104 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 2 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 89 | 89 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 92 | 92 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 83 | 82 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 54-133 | 1 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 99 | 100 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 68-120 | 1 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 95 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 91 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 74-130 | 0 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473877
Reported: 05/27/14 at 02:36 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 83 | 83 | 56-120 | 0 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 98 | 99 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 105 | 104 | 80-120 | 0 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 97 | 97 | 63-120 | 0 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 99 | 97 | 80-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 42* | 42* | 47-120 | 0 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 93 | 94 | 56-120 | 2 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 2 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 100 | 97 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 48-132 | 0 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 102 | 104 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 67-124 | 0 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 108 | 108 | 80-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 109 | 110 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 85 | 87 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 86 | 84 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 92 | 92 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 95 | 94 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 51-124 | 0 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 70-120 | 1 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 58-126 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 92 | 93 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 108 | 107 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 97 | 96 | 76-120 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 98 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 79 | 80 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473877
Reported: 05/27/14 at 02:36 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Batch number: 14136162401A | Sample number(s): 7461253 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7461253 UNSPK: P466839 | | | | | | | | |
| Acetone | 129 | 113 | 31-195 | 11 | 30 | | | | |
| Acrolein | 67 | 81 | 10-165 | 21 | 30 | | | | |
| Acrylonitrile | 96 | 82 | 48-139 | 13 | 30 | | | | |
| t-Amyl methyl ether | 111 | 94 | 50-132 | 14 | 30 | | | | |
| Benzene | 123 | 101 | 55-143 | 17 | 30 | | | | |
| Bromobenzene | 130 | 109 | 43-139 | 15 | 30 | | | | |
| Bromochloromethane | 127 | 120 | 60-137 | 3 | 30 | | | | |
| Bromodichloromethane | 126 | 104 | 53-136 | 17 | 30 | | | | |
| Bromoform | 131 | 105 | 50-144 | 20 | 30 | | | | |
| Bromomethane | 120 | 124 | 42-168 | 6 | 30 | | | | |
| 2-Butanone | 110 | 95 | 37-163 | 13 | 30 | | | | |
| t-Butyl alcohol | 117 | 115 | 47-153 | 0 | 30 | | | | |
| n-Butylbenzene | 117 | 101 | 30-146 | 12 | 30 | | | | |
| sec-Butylbenzene | 131 | 102 | 33-157 | 22 | 30 | | | | |
| tert-Butylbenzene | 125 | 108 | 41-152 | 13 | 30 | | | | |
| Carbon Disulfide | 118 | 94 | 48-146 | 20 | 30 | | | | |
| Carbon Tetrachloride | 152 | 123 | 51-165 | 18 | 30 | | | | |
| Chlorobenzene | 130 | 102 | 49-135 | 22 | 30 | | | | |
| Chloroethane | 113 | 117 | 39-152 | 6 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 76 | 92 | 32-139 | 21 | 30 | | | | |
| Chloroform | 144* | 119 | 61-142 | 17 | 30 | | | | |
| 1-Chlorohexane | 104 | 98 | 70-130 | 4 | 30 | | | | |
| Chloromethane | 98 | 99 | 36-143 | 4 | 30 | | | | |
| 2-Chlorotoluene | 123 | 104 | 42-146 | 14 | 30 | | | | |
| 4-Chlorotoluene | 122 | 104 | 39-145 | 13 | 30 | | | | |
| Chlorotrifluoroethene | 72 | 76 | 70-130 | 3 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 98 | 90 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 129* | 105 | 51-128 | 18 | 30 | | | | |
| 1,2-Dibromoethane | 122 | 99 | 54-129 | 19 | 30 | | | | |
| Dibromomethane | 124 | 103 | 57-130 | 17 | 30 | | | | |
| 1,2-Dichlorobenzene | 123 | 108 | 36-133 | 11 | 30 | | | | |
| 1,3-Dichlorobenzene | 128 | 104 | 34-134 | 19 | 30 | | | | |
| 1,4-Dichlorobenzene | 122 | 103 | 35-136 | 14 | 30 | | | | |
| Dichlorodifluoromethane | 121 | 122 | 26-151 | 3 | 30 | | | | |
| 1,1-Dichloroethane | 127 | 103 | 63-142 | 18 | 30 | | | | |
| 1,2-Dichloroethane | 149* | 120 | 54-143 | 19 | 30 | | | | |
| 1,1-Dichloroethene | 142 | 117 | 61-149 | 17 | 30 | | | | |
| cis-1,2-Dichloroethene | 128 | 105 | 67-135 | 18 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473877
Reported: 05/27/14 at 02:36 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 140 | 113 | 64-144 | 19 | 30 | | | | |
| 1,2-Dichloropropane | 116 | 97 | 54-144 | 16 | 30 | | | | |
| 1,3-Dichloropropane | 114 | 92 | 51-140 | 18 | 30 | | | | |
| 2,2-Dichloropropane | 129 | 104 | 53-147 | 19 | 30 | | | | |
| 1,1-Dichloropropene | 134 | 110 | 54-145 | 17 | 30 | | | | |
| cis-1,3-Dichloropropene | 117 | 93 | 45-137 | 20 | 30 | | | | |
| trans-1,3-Dichloropropene | 113 | 92 | 51-134 | 18 | 30 | | | | |
| Ethyl t-butyl ether | 110 | 94 | 58-124 | 13 | 30 | | | | |
| Ethylbenzene | 131 | 104 | 44-141 | 21 | 30 | | | | |
| Freon 113 | 142 | 115 | 56-156 | 18 | 30 | | | | |
| Freon 133a | 101 | 107 | 61-131 | 4 | 30 | | | | |
| Hexachlorobutadiene | 139 | 115 | 10-155 | 17 | 30 | | | | |
| 2-Hexanone | 96 | 81 | 32-160 | 15 | 30 | | | | |
| di-Isopropyl ether | 112 | 94 | 59-133 | 15 | 30 | | | | |
| Isopropylbenzene | 136 | 110 | 38-144 | 19 | 30 | | | | |
| p-Isopropyltoluene | 117 | 100 | 29-152 | 13 | 30 | | | | |
| Methyl Iodide | 148* | 120 | 52-139 | 18 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 121 | 101 | 55-129 | 15 | 30 | | | | |
| 4-Methyl-2-pentanone | 100 | 83 | 46-139 | 16 | 30 | | | | |
| Methylene Chloride | 188* | 238* | 60-149 | 26 | 30 | | | | |
| n-Propylbenzene | 128 | 109 | 39-157 | 14 | 30 | | | | |
| Styrene | 128 | 102 | 35-134 | 20 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 134 | 106 | 55-139 | 21 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 104 | 89 | 29-182 | 13 | 30 | | | | |
| Tetrachloroethene | 151* | 122 | 42-149 | 19 | 30 | | | | |
| Toluene | 120 | 100 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 111 | 96 | 10-140 | 12 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 114 | 98 | 10-136 | 12 | 30 | | | | |
| 1,1,1-Trichloroethane | 131 | 106 | 52-146 | 19 | 30 | | | | |
| 1,1,2-Trichloroethane | 123 | 99 | 58-152 | 19 | 30 | | | | |
| Trichloroethene | 132 | 109 | 53-144 | 17 | 30 | | | | |
| Trichlorofluoromethane | 127 | 127 | 47-163 | 2 | 30 | | | | |
| 1,2,3-Trichloropropane | 120 | 98 | 36-180 | 18 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 127 | 108 | 37-149 | 14 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 126 | 110 | 38-150 | 11 | 30 | | | | |
| Vinyl Acetate | 30 | 23 | 21-139 | 25 | 30 | | | | |
| Vinyl Chloride | 104 | 108 | 50-154 | 6 | 30 | | | | |
| m+p-Xylene | 129 | 104 | 44-137 | 19 | 30 | | | | |
| o-Xylene | 124 | 99 | 42-137 | 20 | 30 | | | | |
| Batch number: 14136162401A | Sample number(s): 7461253 | | BKG: P457971 | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 5.0 | 5.0 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473877
Reported: 05/27/14 at 02:36 PM

## Surrogate Quality Control

Batch number: B141431AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7461253 | 110 | 105 | 99 | 93 |
| Blank | 110 | 100 | 99 | 97 |
| LCS | 108 | 106 | 102 | 105 |
| MS | 110 | 103 | 101 | 104 |
| MSD | 111 | 105 | 97 | 95 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141392AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7461252 | 98 | 99 | 99 | 96 |
| Blank | 99 | 100 | 99 | 95 |
| LCS | 99 | 102 | 100 | 100 |
| LCSD | 98 | 102 | 101 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct#13013 Gp#1473877 sample#7461252-53

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/12/2014

CarrierName: FedEx

AirbillNo: 7988 3097 7226

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140512-02

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate - Nitrite - TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-051214 | 5/12/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-501-SA5B-SV-0.75-1.25 | 5/12/14 14:50 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-501-SA5B-SV-0.75-1.25 | 5/12/14 14:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Shelly Mysel | 05/12/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/13/14 | 6925 |

**Nicole Maljovec** 13013/1473877/746252-3 NM 5/17/14

**From:** Mysel, Stefanie <MyselSJ@cdmsmith.com>
**Sent:** Tuesday, May 13, 2014 4:10 PM
**To:** Nicole Maljovec
**Cc:** Hartman, Pamela; Zakowski, Cherie; Burgesser, Todd
**Subject:** SSFL COC 05/12/2014 Revision
**Attachments:** Lancaster 051214 COC(2)-REV.pdf

Nicole,

COC 2 (soil vapor sampling) from yesterday was edited. The sample name was changed. I have attached a relinquished revised COC for your records.

Stefanie J. Mysel
Geologist

CDM Smith
111 Academy Way
Suite 150
Irvine, CA 92617
Direct: 949-930-9877
Main: 949-752-5452
Cell: 949-579-0634
Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>

13013/1473877/7461252-53 Revised COC NM 5/17/14

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/12/2014
CarrierName: FedEx
AirbillNo: 798830977226

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140512-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-051214 | 5/12/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-501-SA5B-SB-0.75-1.25 | 5/12/14 14:50 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-501-SA5B-SB-0.75-1.25 | 5/12/14 14:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 5/12/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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# Sample Administration Receipt Documentation Log

Doc Log ID: 14326

Group Number(s): 1473877

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/13/2014 9:25 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 09:53 on 05/13/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | 3258-IR | 2.9 | IR | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 23, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/13/2014
Group Number: 1473878
SDG: PH175
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| FDG-SL-748-SA5C-SB-0.0-0.5 Soil | 7461254 |
| FDG-SL-748-SA5C-SB-4.0-5.0 Soil | 7461255 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** FDG-SL-748-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7461254**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:32 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-0 SDG#: PH175-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.85 | J | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 3.0 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.8 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 6.6 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 3.8 | J | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.6 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 6.0 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 13 | J | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 7.0 | | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.2 | J | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | J | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 3.6 | | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.7 | | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 6.3 | | 1.8 | 0.71 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.4 | U | 5.4 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 22 | | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 25,000 | | 42.8 | 7.72 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.28 | U | 4.28 | 0.792 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.96 | | 4.28 | 0.749 | 1 |
| 06946 | Barium | 7440-39-3 | 122 | | 1.07 | 0.0353 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.888 | J | 1.07 | 0.0717 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461254**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:32 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-0 SDG#: PH175-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 6.28 | J | 10.7 | 0.899 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.305 | J | 1.07 | 0.0814 | 1 |
| 01650 | Calcium | 7440-70-2 | 26,600 | | 21.4 | 3.58 | 1 |
| 06951 | Chromium | 7440-47-3 | 30.9 | | 3.21 | 0.171 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.12 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 20.8 | | 2.14 | 0.310 | 1 |
| 01654 | Iron | 7439-89-6 | 27,600 | | 85.7 | 7.75 | 2 |
| 06955 | Lead | 7439-92-1 | 18.0 | | 3.21 | 0.535 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.5 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,100 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 431 | | 1.07 | 0.0889 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.14 | U | 2.14 | 0.182 | 1 |
| 06961 | Nickel | 7440-02-0 | 16.5 | | 2.14 | 0.139 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 454 | | 10.7 | 3.09 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,910 | | 107 | 8.93 | 1 |
| 01667 | Sodium | 7440-23-5 | 159 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.18 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,210 | | 1.07 | 0.182 | 1 |
| 06971 | Vanadium | 7440-62-2 | 60.4 | | 1.07 | 0.139 | 1 |
| 06972 | Zinc | 7440-66-6 | 149 | | 4.28 | 0.214 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.40 | | 5.35 | 0.899 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.351 | J | 0.428 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.200 | J | 0.214 | 0.0278 | 2 |
| 06144 | Strontium | 7440-24-6 | 79.2 | | 0.428 | 0.0728 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.390 | | 0.214 | 0.0321 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0201 | | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.74 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-748-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7461254**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:32 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-0 SDG#: PH175-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.193 | JQ | 1.06 | 0.0946 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.708 | JBQ | 5.28 | 0.127 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.03 | JB | 5.28 | 0.135 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 2.44 | J | 5.28 | 0.137 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.31 | JB | 5.28 | 0.136 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 56.8 | B | 5.28 | 0.135 | 1 |
| 11031 | OCDD | 3268-87-9 | 607 | B | 10.6 | 0.0796 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.801 | J | 1.06 | 0.109 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.873 | JB | 5.28 | 0.0643 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.439 | JB | 5.28 | 0.0581 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.591 | JB | 5.28 | 0.0941 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.684 | JB | 5.28 | 0.0928 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.320 | JBQ | 5.28 | 0.0976 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.451 | JBQ | 5.28 | 0.0935 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 6.20 | B | 5.28 | 0.0554 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.581 | JBQ | 5.28 | 0.0614 | 1 |
| 11031 | OCDF | 39001-02-0 | 15.3 | B | 10.6 | 0.0863 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.76 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 74 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 64 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 62 | 21 - 178 |
| 13C12-123478-HxCDF | 65 | 26 - 152 |
| 13C12-123678-HxCDF | 66 | 26 - 123 |
| 13C12-234678-HxCDF | 66 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 68 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 52 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461254**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:32 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-0 SDG#: PH175-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461254**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:32 by WT

Submitted: 05/13/2014 09:25
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-0 SDG#: PH175-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 11:38 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 16:24 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/20/2014 23:03 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14136002 | 05/21/2014 15:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14136002 | 05/17/2014 10:25 | Brett M Weidman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/16/2014 15:51 | Maria A Orrs | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:20 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:26 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:26 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:26 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:26 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461254**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 08:32 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-0 SDG#: PH175-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:17 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14133039402A | 05/13/2014 22:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-748-SA5C-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7461255**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 10:00 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-4 SDG#: PH175-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 87 | | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,300 | | 42.8 | 7.71 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.28 | U | 4.28 | 0.791 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.58 | | 4.28 | 0.749 | 1 |
| 06946 | Barium | 7440-39-3 | 72.5 | | 1.07 | 0.0353 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.633 | J | 1.07 | 0.0717 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461255**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 10:00 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-4 SDG#: PH175-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 1.40 | J | 10.7 | 0.898 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.07 | U | 1.07 | 0.0813 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,130 | | 21.4 | 3.57 | 1 |
| 06951 | Chromium | 7440-47-3 | 28.3 | | 3.21 | 0.171 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.57 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 12.8 | | 2.14 | 0.310 | 1 |
| 01654 | Iron | 7439-89-6 | 21,000 | | 42.8 | 3.87 | 1 |
| 06955 | Lead | 7439-92-1 | 8.49 | | 3.21 | 0.535 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.9 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,500 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 250 | | 1.07 | 0.0888 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.14 | U | 2.14 | 0.182 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.0 | | 2.14 | 0.139 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 257 | | 10.7 | 3.09 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,400 | | 107 | 8.92 | 1 |
| 01667 | Sodium | 7440-23-5 | 84.9 | J | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.12 | J | 10.7 | 0.235 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,010 | | 1.07 | 0.182 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.3 | | 1.07 | 0.139 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.5 | | 4.28 | 0.214 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.13 | J | 5.35 | 0.898 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.193 | J | 0.428 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.187 | J | 0.214 | 0.0278 | 2 |
| 06144 | Strontium | 7440-24-6 | 31.7 | | 0.428 | 0.0727 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.286 | | 0.214 | 0.0321 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0169 | J | 0.0177 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.52 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-748-SA5C-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7461255**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 10:00 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-4 SDG#: PH175-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0816 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.15 | U | 5.15 | 0.0575 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.15 | U | 5.15 | 0.0358 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0501 | J | 5.15 | 0.0374 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.15 | U | 5.15 | 0.0342 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.715 | JB | 5.15 | 0.0633 | 1 |
| 11031 | OCDD | 3268-87-9 | 6.71 | JB | 10.3 | 0.0468 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0507 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 5.15 | U | 5.15 | 0.0307 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.15 | U | 5.15 | 0.0305 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 5.15 | U | 5.15 | 0.0349 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.15 | U | 5.15 | 0.0343 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.15 | U | 5.15 | 0.0373 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.15 | U | 5.15 | 0.0348 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0357 | JBQ | 5.15 | 0.0190 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0302 | JBQ | 5.15 | 0.0290 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.193 | JBQ | 10.3 | 0.0842 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0142 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 65 | 25 - 181 |
| 13C12-123478-HxCDD | 70 | 32 - 141 |
| 13C12-123678-HxCDD | 68 | 28 - 130 |
| 13C12-123789-HxCDD | 71 | 28 - 130 |
| 13C12-1234678-HpCDD | 68 | 23 - 140 |
| 13C12-OCDD | 58 | 17 - 157 |
| 13C12-2378-TCDF | 55 | 24 - 169 |
| 13C12-12378-PeCDF | 60 | 24 - 185 |
| 13C12-23478-PeCDF | 55 | 21 - 178 |
| 13C12-123478-HxCDF | 59 | 26 - 152 |
| 13C12-123678-HxCDF | 61 | 26 - 123 |
| 13C12-234678-HxCDF | 60 | 28 - 136 |
| 13C12-123789-HxCDF | 61 | 29 - 147 |
| 13C12-1234678-HpCDF | 70 | 28 - 143 |
| 13C12-1234789-HpCDF | 52 | 26 - 138 |
| 13C12-OCDF | 41 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461255**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 10:00 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-4 SDG#: PH175-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461255**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 10:00 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-4 SDG#: PH175-02*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 05:15 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 16:37 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/20/2014 23:58 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14136002 | 05/21/2014 16:55 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14136002 | 05/17/2014 10:25 | Brett M Weidman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:24 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:28 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:28 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:28 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:28 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-748-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7461255**
**LL Group # 1473878**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/12/2014 10:00 by WT

Submitted: 05/13/2014 09:25
Reported: 05/23/2014 10:50

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

748-4 SDG#: PH175-02*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:19 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14133039402A | 05/13/2014 22:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401A | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473878
Reported: 05/23/14 at 10:50 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14140SLA026 | Sample number(s): 7461254-7461255 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 117 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 118 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 80-119 | | |
| Batch number: 141360001A | Sample number(s): 7461254-7461255 | | | | | | | | | |
| 6a Perchlorate (Method 6850) | 5.0 | U | 5.0 | 2.1 | ug/kg | 105 | | 85-115 | | |
| Batch number: 141360028A | Sample number(s): 7461254-7461255 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 80 | 85 | 36-106 | 5 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 95 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 100 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473878
Reported: 05/23/14 at 10:50 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141340637004 | Sample number(s): 7461254-7461255 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 108 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 1.15 | J | 10.0 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 104 | | 80-120 | | |
| Calcium | 13.6 | J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 108 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 104 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.35 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 103 | | 80-120 | | |
| Zinc | 0.568 | J | 4.00 | 0.200 | mg/kg | 103 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141340637004A | Sample number(s): 7461254-7461255 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.0750 | J | 0.400 | 0.0680 | mg/kg | 100 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141340637004B | Sample number(s): 7461254-7461255 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 109 | | 80-120 | | |
| Batch number: 141350638001 | Sample number(s): 7461254-7461255 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 91 | | 85-120 | | |
| Batch number: 14133039402A | Sample number(s): 7461254-7461255 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 101 | | 95-105 | | |
| Batch number: 14136162401A | Sample number(s): 7461254-7461255 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14136002 | Sample number(s): 7461254-7461255 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0511 | ng/kg | 96 | | 67-158 | | |
| 12378-PeCDD | 0.0427 | J | 5.00 | 0.0348 | ng/kg | 98 | | 70-142 | | |
| 123478-HxCDD | 0.0321 | J | 5.00 | 0.0189 | ng/kg | 100 | | 70-164 | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473878
Reported: 05/23/14 at 10:50 AM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0205 | ng/kg | 97 | | 76-134 | | |
| 123789-HxCDD | 0.0241 | J | 5.00 | 0.0191 | ng/kg | 99 | | 64-162 | | |
| 1234678-HpCDD | 0.0887 | J | 5.00 | 0.0223 | ng/kg | 94 | | 70-140 | | |
| OCDD | 0.355 | J | 10.0 | 0.0233 | ng/kg | 91 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0390 | ng/kg | 102 | | 75-158 | | |
| 12378-PeCDF | 0.0581 | J | 5.00 | 0.0159 | ng/kg | 98 | | 80-134 | | |
| 23478-PeCDF | 0.0414 | J | 5.00 | 0.0167 | ng/kg | 98 | | 68-160 | | |
| 123478-HxCDF | 0.0576 | J | 5.00 | 0.0141 | ng/kg | 96 | | 72-134 | | |
| 123678-HxCDF | 0.0280 | J | 5.00 | 0.0124 | ng/kg | 93 | | 84-130 | | |
| 123789-HxCDF | 0.0367 | J | 5.00 | 0.0172 | ng/kg | 94 | | 78-130 | | |
| 234678-HxCDF | 0.0471 | J | 5.00 | 0.0134 | ng/kg | 95 | | 70-156 | | |
| 1234678-HpCDF | 0.0135 | J | 5.00 | 0.00737 | ng/kg | 91 | | 82-122 | | |
| 1234789-HpCDF | 0.0284 | J | 5.00 | 0.0139 | ng/kg | 93 | | 78-138 | | |
| OCDF | 0.165 | J | 10.0 | 0.0362 | ng/kg | 92 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0134 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14140SLA026 | Sample number(s): 7461254-7461255 UNSPK: 7461254 | | | | | | | | |
| Acenaphthene | 98 | 92 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 103 | 95 | 60-128 | 8 | 30 | | | | |
| Anthracene | 97 | 93 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 98 | 100 | 44-143 | 2 | 30 | | | | |
| Benzo(a)pyrene | 84 | 82 | 49-137 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 96 | 96 | 26-142 | 0 | 30 | | | | |
| Benzo(e)pyrene | 78 | 73 | 63-111 | 6 | 30 | | | | |
| Benzo(g,h,i)perylene | 48 | 42 | 33-141 | 12 | 30 | | | | |
| Benzo(k)fluoranthene | 91 | 85 | 49-144 | 6 | 30 | | | | |
| Butylbenzylphthalate | 112 | 108 | 64-156 | 4 | 30 | | | | |
| Di-n-butylphthalate | 114 | 107 | 52-147 | 7 | 30 | | | | |
| Chrysene | 91 | 89 | 43-141 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 66 | 58 | 25-145 | 13 | 30 | | | | |
| Diethylphthalate | 102 | 92 | 66-140 | 10 | 30 | | | | |
| Dimethylphthalate | 100 | 91 | 70-123 | 10 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 99 | 94 | 48-164 | 4 | 30 | | | | |
| Fluoranthene | 93 | 93 | 38-153 | 0 | 30 | | | | |
| Fluorene | 94 | 89 | 57-130 | 6 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 69 | 52 | 26-139 | 26 | 30 | | | | |
| 1-Methylnaphthalene | 94 | 85 | 59-139 | 9 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 89 | 46-147 | 7 | 30 | | | | |
| Naphthalene | 94 | 88 | 52-136 | 6 | 30 | | | | |
| N-Nitrosodimethylamine | 85 | 82 | 39-134 | 4 | 30 | | | | |
| Di-n-octylphthalate | 134 | 128 | 52-162 | 5 | 30 | | | | |
| Phenanthrene | 102 | 95 | 50-137 | 6 | 30 | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473878
Reported: 05/23/14 at 10:50 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Pyrene | 86 | 91 | 26-143 | 4 | 30 | | | | |
| Batch number: 141360001A | Sample number(s): 7461254-7461255 UNSPK: P457971 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 108 | 111 | 80-120 | 3 | 20 | | | | |
| Batch number: 141360028A | Sample number(s): 7461254-7461255 UNSPK: 7461254 | | | | | | | | |
| PCB-1016 | 91 | 92 | 41-135 | 3 | 50 | | | | |
| PCB-1260 | 107 | 110 | 40-134 | 3 | 50 | | | | |
| Batch number: 141340637004 | Sample number(s): 7461254-7461255 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Aluminum | 3014 (2) | 2861 (2) | 75-125 | 2 | 20 | 13,000 | 12,600 | 4 | 20 |
| Antimony | 47* | 45* | 75-125 | 4 | 20 | 3.85 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 104 | 106 | 75-125 | 2 | 20 | 5.42 | 5.66 | 4 (1) | 20 |
| Barium | 105 | 106 | 75-125 | 1 | 20 | 70.9 | 64.6 | 9 | 20 |
| Beryllium | 103 | 104 | 75-125 | 0 | 20 | 0.543 J | 0.519 J | 4 (1) | 20 |
| Boron | 99 | 101 | 75-125 | 2 | 20 | 1.68 J | 1.41 J | 17 (1) | 20 |
| Cadmium | 95 | 98 | 75-125 | 3 | 20 | 0.962 U | 0.971 U | 0 (1) | 20 |
| Calcium | 369 (2) | 365 (2) | 75-125 | 0 | 20 | 3,160 | 2,780 | 13 | 20 |
| Chromium | 127* | 128* | 75-125 | 1 | 20 | 15.8 | 15.8 | 0 | 20 |
| Cobalt | 98 | 94 | 75-125 | 4 | 20 | 4.73 | 4.51 | 5 (1) | 20 |
| Copper | 120 | 136* | 75-125 | 9 | 20 | 11.2 | 10.9 | 3 | 20 |
| Iron | 3011 (2) | 3164 (2) | 75-125 | 1 | 20 | 18,700 | 17,800 | 5 | 20 |
| Lead | 106 | 115 | 75-125 | 5 | 20 | 8.38 | 7.78 | 7 (1) | 20 |
| Lithium | 104 | 104 | 75-125 | 0 | 20 | 21.6 | 21.2 | 2 | 20 |
| Magnesium | 468 (2) | 442 (2) | 75-125 | 1 | 20 | 3,870 | 3,750 | 3 | 20 |
| Manganese | 198 (2) | 96 (2) | 75-125 | 14 | 20 | 288 | 226 | 24* | 20 |
| Molybdenum | 91 | 91 | 75-125 | 0 | 20 | 0.420 J | 0.214 J | 65* (1) | 20 |
| Nickel | 97 | 102 | 75-125 | 4 | 20 | 12.7 | 12.0 | 6 | 20 |
| Phosphorus | 125 | 154* | 75-125 | 7 | 20 | 260 | 258 | 1 | 20 |
| Potassium | 155* | 150* | 75-125 | 1 | 20 | 2,210 | 2,130 | 4 | 20 |
| Sodium | 98 | 99 | 75-125 | 0 | 20 | 84.1 J | 80.3 J | 5 (1) | 20 |
| Tin | 85 | 85 | 75-125 | 0 | 20 | 2.84 J | 2.62 J | 8 (1) | 20 |
| Titanium | 363 (2) | 380 (2) | 75-125 | 1 | 20 | 923 | 886 | 4 | 20 |
| Vanadium | 116 | 118 | 75-125 | 1 | 20 | 34.5 | 33.0 | 4 | 20 |
| Zinc | 161* | 237* | 75-125 | 22* | 20 | 72.0 | 70.1 | 3 | 20 |
| Zirconium | 98 | 97 | 75-125 | 1 | 20 | 2.95 J | 3.20 J | 8 (1) | 20 |
| Batch number: 141340637004A | Sample number(s): 7461254-7461255 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Silver | 105 | 101 | 75-125 | 3 | 20 | 0.0285 J | 0.0266 J | 7 (1) | 20 |
| Strontium | 221* | 184* | 75-125 | 7 | 20 | 27.2 | 23.5 | 15 | 20 |
| Thallium | 116 | 102 | 75-125 | 8 | 20 | 0.262 | 0.225 | 15 (1) | 20 |
| Batch number: 141340637004B | Sample number(s): 7461254-7461255 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Selenium | 101 | 111 | 75-125 | 9 | 20 | 0.144 J | 0.159 J | 10 (1) | 20 |
| Batch number: 141350638001 | Sample number(s): 7461254-7461255 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| 3a Mercury 7471A | 104 | 101 | 65-135 | 1 | 20 | 0.0132 J | 0.0148 J | 12 (1) | 20 |
| Batch number: 14133039402A | Sample number(s): 7461254-7461255 BKG: 7461254 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.74 | 7.72 | 0 | 3 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473878
Reported: 05/23/14 at 10:50 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14136162401A | Sample number(s): 7461254-7461255 | | | | | BKG: P457971 | | | |
| 14a Moisture Content by 160.3 | | | | | | 5.0 | 5.0 | 0 | 20 |
| Batch number: 14136002 | Sample number(s): 7461254-7461255 UNSPK: P459290 | | | | | | | | |
| 2378-TCDD | 94 | 95 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDD | 98 | 99 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDD | 100 | 100 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDD | 98 | 98 | 40-135 | 3 | 20 | | | | |
| 123789-HxCDD | 97 | 97 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDD | 100 | 97 | 40-135 | 0 | 20 | | | | |
| OCDD | 132 | 119 | 40-135 | 5 | 20 | | | | |
| 2378-TCDF | 102 | 103 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDF | 97 | 98 | 40-135 | 3 | 20 | | | | |
| 23478-PeCDF | 99 | 100 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDF | 95 | 96 | 40-135 | 4 | 20 | | | | |
| 123678-HxCDF | 97 | 96 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 94 | 95 | 40-135 | 4 | 20 | | | | |
| 234678-HxCDF | 96 | 96 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDF | 93 | 94 | 40-135 | 4 | 20 | | | | |
| 1234789-HpCDF | 93 | 92 | 40-135 | 2 | 20 | | | | |
| OCDF | 92 | 92 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14140SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7461254 | 85 | 96 | 82 |
| 7461255 | 88 | 102 | 81 |
| Blank | 91 | 104 | 83 |
| LCS | 93 | 109 | 85 |
| MS | 87 | 98 | 84 |
| MSD | 85 | 90 | 79 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141360028A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7461254 | 99 | 101 |
| 7461255 | 101 | 102 |
| Blank | 102 | 107 |

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1473878
Reported: 05/23/14 at 10:50 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| LCS | 107 | 106 |
| LCSD | 103 | 108 |
| MS | 98 | 104 |
| MSD | 99 | 107 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14136002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7461254 | 72 | 70 | 74 | 75 | 74 | 72 |
| 7461255 | 63 | 65 | 70 | 68 | 71 | 68 |
| Blank | 72 | 82 | 77 | 79 | 78 | 76 |
| MS | 77 | 81 | 76 | 77 | 78 | 76 |
| MSD | 69 | 73 | 72 | 73 | 73 | 73 |
| OPR | 77 | 85 | 87 | 86 | 86 | 90 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7461254 | 64 | 64 | 64 | 62 | 65 | 66 |
| 7461255 | 58 | 55 | 60 | 55 | 59 | 61 |
| Blank | 70 | 73 | 89 | 84 | 77 | 87 |
| MS | 74 | 80 | 92 | 85 | 77 | 85 |
| MSD | 74 | 72 | 84 | 78 | 72 | 80 |
| OPR | 89 | 79 | 92 | 90 | 86 | 97 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7461254 | 66 | 71 | 68 | 67 | 52 |
| 7461255 | 60 | 61 | 70 | 52 | 41 |
| Blank | 80 | 72 | 106 | 63 | 52 |
| MS | 79 | 78 | 100 | 66 | 54 |
| MSD | 75 | 74 | 90 | 66 | 58 |
| OPR | 90 | 87 | 115 | 80 | 74 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

accr#13013 Cap#1473878 Sample# 7461254-55

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/12/2014
CarrierName: FedEx
AirbillNo: 798830977226

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140512-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FDG-SL-748-SA5C-SB-0.0-0.5 | 5/12/14 08:32 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-748-SA5C-SB-0.0-0.5 | 5/12/14 08:32 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-748-SA5C-SB-4.0-5.0 | 5/12/14 10:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-748-SA5C-SB-4.0-5.0 | 5/12/14 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Whitney Treadway

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stephanie Lopez | 05/12/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/13/14 | 0925 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14326

Group Number(s): 1473878

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/13/2014 9:25 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 09:53 on 05/13/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | 3258-IR | 2.9 | IR | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

REVISED

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 03, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/14/2014
Group Number: 1474152
SDG: PH176
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB1-051314 Water | 7462588 |
| FDG-SL-756-SA5C-SB-15.0-16.0 Soil | 7462589 |
| FDG-SL-836-SA5B-SB-15.0-16.0 Soil | 7462590 |
| FDG-SL-836-SA5B-SB-19.0-20.0 Soil | 7462591 |
| FB-051314 Water | 7462597 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

REVISED

**Sample Description: TB1-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462588**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:00 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB1-- SDG#: PH176-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 12:02 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 12:02 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-756-SA5C-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7462589**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 09:20 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

756-- SDG#: PH176-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 14 | J | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.88 | J | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.94 | J | 1.8 | 0.72 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.4 | U | 5.4 | 2.3 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,500 | | 43.0 | 7.74 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.30 | U | 4.30 | 0.795 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.48 | | 4.30 | 0.752 | 1 |
| 06946 | Barium | 7440-39-3 | 67.7 | | 1.07 | 0.0354 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.762 | J | 1.07 | 0.0720 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-756-SA5C-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7462589**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 09:20 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

756-- SDG#: PH176-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 10.7 | U | 10.7 | 0.902 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.07 | U | 1.07 | 0.0816 | 1 |
| 01650 | Calcium | 7440-70-2 | 1,850 | | 21.5 | 3.59 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.1 | | 3.22 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.63 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 8.45 | | 2.15 | 0.311 | 1 |
| 01654 | Iron | 7439-89-6 | 18,400 | | 43.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 7.08 | | 3.22 | 0.537 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.9 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,240 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 215 | | 1.07 | 0.0892 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.455 | J | 2.15 | 0.183 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.66 | | 2.15 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 179 | | 10.7 | 3.10 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,710 | | 107 | 8.96 | 1 |
| 01667 | Sodium | 7440-23-5 | 119 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.15 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 888 | | 1.07 | 0.183 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.9 | | 1.07 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 40.3 | | 4.30 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.05 | J | 5.37 | 0.902 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.221 | J | 0.430 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0374 | J | 0.215 | 0.0279 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.1 | | 0.430 | 0.0730 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.282 | | 0.215 | 0.0322 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0136 | J | 0.0176 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.62 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-756-SA5C-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7462589**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 09:20 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

756-- SDG#: PH176-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 05:47 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 17:02 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 00:17 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:28 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:31 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:31 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:31 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:31 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:21 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14134039402A | 05/14/2014 20:35 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462590**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:00 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83615 SDG#: PH176-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 2.0 | U | 2.0 | 0.39 | 1 |
| 12969 | Anthracene | 120-12-7 | 2.0 | U | 2.0 | 0.39 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 20 | U | 20 | 3.9 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.0 | U | 2.0 | 0.39 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 10 | J | 21 | 7.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Fluorene | 86-73-7 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | J | 2.0 | 0.78 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 3.0 | | 2.0 | 0.78 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.7 | | 2.0 | 0.78 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 2.0 | U | 2.0 | 0.78 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 21 | U | 21 | 7.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.94 | J | 2.0 | 0.78 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.0 | U | 2.0 | 0.78 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 22.56 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 39 | U | 39 | 12 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 39 | U | 39 | 12 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 39 | U | 39 | 12 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 20 | U | 20 | 3.9 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 20 | U | 20 | 6.0 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 20 | U | 20 | 4.8 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 20 | U | 20 | 4.8 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 20 | U | 20 | 3.9 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 20 | U | 20 | 5.1 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 20 | U | 20 | 4.6 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 20 | U | 20 | 3.9 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 20 | U | 20 | 3.9 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.9 | U | 5.9 | 2.4 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.9 | U | 5.9 | 2.4 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462590**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:00 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83615 SDG#: PH176-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 3.4 | J | 5.9 | 2.4 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | U | 12 | 4.7 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.9 | U | 5.9 | 2.4 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.9 | U | 5.9 | 2.4 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.9 | U | 5.9 | 2.4 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.9 | U | 5.9 | 2.4 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 12 | U | 12 | 4.7 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.9 | U | 5.9 | 2.4 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 31,500 | | 44.8 | 8.08 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.48 | U | 4.48 | 0.829 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.82 | | 4.48 | 0.784 | 1 |
| 06946 | Barium | 7440-39-3 | 123 | | 1.12 | 0.0370 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.00 | J | 1.12 | 0.0751 | 1 |
| 07914 | Boron | 7440-42-8 | 4.77 | J | 11.2 | 0.941 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.12 | U | 1.12 | 0.0852 | 1 |
| 01650 | Calcium | 7440-70-2 | 24,100 | | 22.4 | 3.74 | 1 |
| 06951 | Chromium | 7440-47-3 | 39.6 | | 3.36 | 0.179 | 1 |
| 06952 | Cobalt | 7440-48-4 | 11.3 | | 1.12 | 0.111 | 1 |
| 06953 | Copper | 7440-50-8 | 21.3 | | 2.24 | 0.325 | 1 |
| 01654 | Iron | 7439-89-6 | 33,100 | | 89.6 | 8.11 | 2 |
| 06955 | Lead | 7439-92-1 | 13.8 | | 3.36 | 0.560 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.9 | | 4.5 | 0.38 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,830 | | 11.2 | 1.87 | 1 |
| 06958 | Manganese | 7439-96-5 | 490 | | 1.12 | 0.0930 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.24 | U | 2.24 | 0.190 | 1 |
| 06961 | Nickel | 7440-02-0 | 18.8 | | 2.24 | 0.146 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 367 | | 11.2 | 3.24 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,840 | | 112 | 9.34 | 1 |
| 01667 | Sodium | 7440-23-5 | 230 | | 112 | 18.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.64 | J | 11.2 | 0.246 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,240 | | 1.12 | 0.190 | 1 |
| 06971 | Vanadium | 7440-62-2 | 72.1 | | 1.12 | 0.146 | 1 |
| 06972 | Zinc | 7440-66-6 | 72.7 | | 4.48 | 0.224 | 1 |
| 10146 | Zirconium | 7440-67-7 | 6.81 | | 5.60 | 0.941 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.268 | J | 0.448 | 0.112 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0598 | J | 0.224 | 0.0291 | 2 |
| 06144 | Strontium | 7440-24-6 | 52.2 | | 0.448 | 0.0762 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.439 | | 0.224 | 0.0336 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0128 | J | 0.0190 | 0.0114 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462590**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:00 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83615 SDG#: PH176-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.82 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 15.0 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 06:18 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 2 | 14141A16A | 05/21/2014 19:32 | Marie D Beamenderfer | 22.56 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201413434498 | 05/14/2014 16:38 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201413434498 | 05/14/2014 16:38 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 00:35 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 17:43 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 18:05 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462590**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:00 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83615 SDG#: PH176-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/16/2014 15:55 | Maria A Orrs | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:32 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:33 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:33 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:33 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:33 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:23 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14134039402A | 05/14/2014 20:35 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462591**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:20 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83619 SDG#: PH176-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 2.0 | | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.35 | J | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 2.1 | | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 5.0 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 5.7 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 4.9 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 5.6 | J | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | J | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 5.3 | | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 6.4 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 11 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.99 | J | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 6.1 | | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 3.9 | | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.95 | J | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 4.7 | | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 5.9 | | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 16 | | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 9.8 | | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 2.2 | | 1.0 | 0.2 | 24.65 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 11 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 26 | U | 26 | 11 | 5 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462591**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:20 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83619 SDG#: PH176-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 130 | | 26 | 11 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 310 | | 53 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 11 | 5 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 2 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 15 | | 11 | 4.2 | 2 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 94 | | 11 | 4.2 | 2 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 210 | | 21 | 8.4 | 2 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 2 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,000 | | 40.2 | 7.25 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.02 | U | 4.02 | 0.744 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.31 | J | 4.02 | 0.704 | 1 |
| 06946 | Barium | 7440-39-3 | 84.8 | | 1.01 | 0.0332 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.482 | J | 1.01 | 0.0674 | 1 |
| 07914 | Boron | 7440-42-8 | 1.35 | J | 10.1 | 0.845 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.01 | U | 1.01 | 0.0764 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,990 | | 20.1 | 3.36 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.6 | | 3.02 | 0.161 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.04 | | 1.01 | 0.0996 | 1 |
| 06953 | Copper | 7440-50-8 | 10.9 | | 2.01 | 0.292 | 1 |
| 01654 | Iron | 7439-89-6 | 19,400 | | 40.2 | 3.64 | 1 |
| 06955 | Lead | 7439-92-1 | 7.17 | | 3.02 | 0.503 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.0 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,770 | | 10.1 | 1.68 | 1 |
| 06958 | Manganese | 7439-96-5 | 265 | | 1.01 | 0.0835 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.775 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.66 | | 2.01 | 0.131 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 375 | | 10.1 | 2.91 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,820 | | 101 | 8.39 | 1 |
| 01667 | Sodium | 7440-23-5 | 150 | | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.99 | J | 10.1 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,050 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.5 | | 1.01 | 0.131 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.8 | | 4.02 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.46 | J | 5.03 | 0.845 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.157 | J | 0.402 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.201 | U | 0.201 | 0.0261 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.0 | | 0.402 | 0.0684 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.269 | | 0.201 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0122 | J | 0.0170 | 0.0102 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462591**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:20 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83619 SDG#: PH176-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.1 C. | n.a. | 7.98 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.3 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 13:15 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/21/2014 20:09 | Laura M Krieger | 24.65 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201413434498 | 05/14/2014 16:39 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201413434498 | 05/14/2014 16:39 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 00:54 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 22:46 | Heather E Williams | 5 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 23:08 | Heather E Williams | 2 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FDG-SL-836-SA5B-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7462591**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 11:20 by WT

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

83619 SDG#: PH176-04*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01654 | Iron | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141340637004 | 05/15/2014 21:36 | Maria A Orrs | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141340637004B | 05/16/2014 05:35 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:35 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 2 | 141340637004A | 05/16/2014 05:35 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141340637004A | 05/16/2014 05:35 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141350638001 | 05/19/2014 09:25 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141340637004 | 05/15/2014 07:05 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141350638001 | 05/16/2014 11:14 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14134039402A | 05/14/2014 20:35 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 0.97 | U | 0.97 | 0.048 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.22 | J | 0.97 | 0.048 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.47 | J | 0.97 | 0.048 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 0.97 | U | 0.97 | 0.048 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.25 | J | 0.97 | 0.048 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.048 | U | 0.048 | 0.0097 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Fluorene | 86-73-7 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.048 | U | 0.048 | 0.029 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.048 | U | 0.048 | 0.0097 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 0.97 | U | 0.97 | 0.048 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.048 | U | 0.048 | 0.029 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.048 | U | 0.048 | 0.0097 | 1 |

The holding time was not met. The client was notified and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/l** | | **ug/l** | **ug/l** | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.093 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.49 | U | 0.49 | 0.098 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.49 | U | 0.49 | 0.098 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.098 | U | 0.098 | 0.049 | 1 |

The reverse surrogate, capric acid, is present at <1%.

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| | The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials. | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0012 J | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0030 J | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | | **SW-846 6020A** | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | | **SW-846 7470A** | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | | **SW-846 9040C** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.5 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.98 | U | 1.98 | 0.212 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.90 | U | 9.90 | 0.158 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.90 | U | 9.90 | 0.135 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.90 | U | 9.90 | 0.147 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.90 | U | 9.90 | 0.137 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.611 | JBQ | 9.90 | 0.134 | 1 |
| 10915 | OCDD | 3268-87-9 | 4.37 | JBQ | 19.8 | 0.191 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.98 | U | 1.98 | 0.130 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.272 | JBQ | 9.90 | 0.0933 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 9.90 | U | 9.90 | 0.0860 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.195 | JBQ | 9.90 | 0.0797 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.163 | JBQ | 9.90 | 0.0746 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 9.90 | U | 9.90 | 0.0792 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.0816 | JBQ | 9.90 | 0.0717 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.265 | JBQ | 9.90 | 0.0474 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.160 | JBQ | 9.90 | 0.0519 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.794 | JBQ | 19.8 | 0.154 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | U | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 95 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 88 | 24 - 185 |
| 13C12-23478-PeCDF | 88 | 21 - 178 |
| 13C12-123478-HxCDF | 91 | 26 - 152 |
| 13C12-123678-HxCDF | 92 | 26 - 123 |
| 13C12-234678-HxCDF | 91 | 28 - 136 |
| 13C12-123789-HxCDF | 91 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 95 | 26 - 138 |
| 13C12-OCDF | 93 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

## General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141392AA | 05/19/2014 23:41 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141392AA | 05/19/2014 23:41 | Kevin A Sposito | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142WAE026 | 05/26/2014 12:44 | Mark A Clark | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14142WAE026 | 05/22/2014 19:30 | Nicholas W Shroyer | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 12:27 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 12:27 | Marie D Beamenderfer | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141390018A | 05/19/2014 16:57 | Richard A Shober | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141400007A | 05/22/2014 11:36 | Jessica L Miller | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141400007A | 05/20/2014 18:00 | David V Hershey Jr | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141390014A | 05/20/2014 03:43 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141390015A | 05/20/2014 18:09 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141390015A | 05/19/2014 16:35 | JoElla L Rice | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141390014A | 05/19/2014 16:35 | JoElla L Rice | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14136003 | 05/20/2014 21:57 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14136003 | 05/17/2014 11:00 | Chin F Ly | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: FB-051314 Water**
**SSFL Phase 3**

**LL Sample # WW 7462597**
**LL Group # 1474152**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 15:00 by PH

Submitted: 05/14/2014 09:50
Reported: 07/03/2014 16:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB513 SDG#: PH176-08FB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01767 | Sodium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141350635001 | 05/16/2014 17:42 | Maria A Orrs | 1 |
| 06041 | Selenium | SW-846 6020A | 2 | 141350639001B | 05/16/2014 19:36 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141350639001A | 05/16/2014 19:36 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141350639001A | 05/16/2014 19:36 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141350639001A | 05/16/2014 19:36 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141355713005 | 05/19/2014 08:18 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141350635001 | 05/16/2014 10:00 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141350639001 | 05/16/2014 09:15 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141355713005 | 05/16/2014 11:49 | Micaela L Dishong | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14135002101A | 05/15/2014 14:44 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: Y141392AA | Sample number(s): 7462597 | | | | | | | | |
| Acetone | 20 U | 20. | 6 | ug/l | 84 | 84 | 43-149 | 1 | 30 |
| Acrolein | 100 U | 100. | 40 | ug/l | 87 | 87 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/l | 85 | 88 | 62-120 | 4 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 0.5 | ug/l | 103 | 104 | 75-120 | 1 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/l | 102 | 101 | 78-120 | 1 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 2 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/l | 89 | 89 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 U | 5. | 0.5 | ug/l | 92 | 92 | 73-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 0.5 | ug/l | 83 | 82 | 61-120 | 1 | 30 |
| Bromomethane | 5 U | 5. | 0.5 | ug/l | 93 | 94 | 58-120 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 3 | ug/l | 91 | 92 | 54-133 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 5 | ug/l | 99 | 100 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/l | 95 | 95 | 68-120 | 1 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 0 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/l | 97 | 95 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/l | 89 | 91 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 0.5 | ug/l | 101 | 101 | 74-130 | 0 | 30 |
| Chlorobenzene | 5 U | 5. | 0.5 | ug/l | 100 | 100 | 80-120 | 0 | 30 |
| Chloroethane | 5 U | 5. | 0.5 | ug/l | 83 | 83 | 56-120 | 0 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/l | 98 | 99 | 54-126 | 1 | 30 |
| Chloroform | 5 U | 5. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/l | 105 | 104 | 80-120 | 0 | 30 |
| Chloromethane | 5 U | 5. | 0.5 | ug/l | 97 | 97 | 63-120 | 0 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/l | 98 | 98 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/l | 99 | 97 | 80-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/l | 42* | 42* | 47-120 | 0 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/l | 93 | 94 | 56-120 | 2 | 30 |
| Dibromochloromethane | 5 U | 5. | 0.5 | ug/l | 93 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 0.5 | ug/l | 101 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 5 U | 5. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 2 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 100 | 97 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 0.5 | ug/l | 106 | 105 | 48-132 | 0 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 0.5 | ug/l | 99 | 99 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 102 | 104 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 101 | 100 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 100 | 100 | 67-124 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 108 | 108 | 80-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 109 | 110 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 85 | 87 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 86 | 84 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 92 | 92 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 95 | 94 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 51-124 | 0 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 70-120 | 1 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 58-126 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 92 | 93 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 108 | 107 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 97 | 96 | 76-120 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 98 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 79 | 80 | 56-135 | 1 | 30 |
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |

Batch number: 14140SLA026 Sample number(s): 7462589-7462591

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | 84-118 | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | 78-120 | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | 85-118 | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | 83-119 | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | 80-122 | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | 82-135 | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | 81-110 | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | 79-121 | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | 79-123 | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | 75-144 | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | 75-148 | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | 84-113 | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | 83-123 | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | 73-147 | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | 85-122 | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 117 | 68-146 | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | 85-116 | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | 84-120 | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | 82-123 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 118 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 80-119 | | |
| Batch number: 14142WAE026 | Sample number(s): 7462597 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 115 | 113 | 83-119 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 105 | 81-130 | 4 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 108 | 83-125 | 3 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 110 | 115 | 79-122 | 4 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 97 | 97 | 80-121 | 0 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 111 | 107 | 79-136 | 4 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 88 | 89 | 67-118 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 98 | 72-132 | 0 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 97 | 81-131 | 2 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 107 | 116 | 40-138 | 8 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 111 | 118 | 64-141 | 6 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 97 | 101 | 84-118 | 4 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 102 | 66-133 | 1 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 91 | 91 | 64-137 | 0 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 92 | 95 | 23-139 | 3 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.24 | J | 1.0 | 0.050 | ug/l | 120 | 131 | 70-143 | 9 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 106 | 84-124 | 2 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 102 | 82-119 | 3 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 100 | 68-132 | 0 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 94 | 96 | 86-130 | 2 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 101 | 81-131 | 2 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 95 | 98 | 82-122 | 3 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 65 | 61 | 56-96 | 6 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 118 | 121 | 57-145 | 2 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 99 | 102 | 83-116 | 3 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 100 | 78-125 | 4 | 30 |
| Batch number: 14141A16A | Sample number(s): 7462590-7462591 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 80 | | 67-120 | | |
| Batch number: 14142A94A | Sample number(s): 7462588,7462597 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 109 | 111 | 80-133 | 2 | 30 |
| Batch number: 141360001A | Sample number(s): 7462589 | | | | | | | | | |
| 6a Perchlorate (Method 6850) | 5.0 | U | 5.0 | 2.1 | ug/kg | 105 | | 85-115 | | |
| Batch number: 141390018A | Sample number(s): 7462597 | | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 | U | 1.0 | 0.20 | ug/l | 97 | | 85-115 | | |
| Batch number: 141360028A | Sample number(s): 7462589-7462591 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 80 | 85 | 36-106 | 5 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 95 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 100 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141400007A | Sample number(s): 7462597 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 72 | 72 | 34-115 | 0 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 87 | 84 | 60-117 | 3 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 92 | 90 | 67-128 | 2 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141390014A | Sample number(s): 7462597 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 78 | 75 | 67-109 | 4 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 84 | 83 | 71-119 | 1 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 84 | 83 | 75-117 | 1 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 58 | 63 | 44-134 | 8 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 60 | 56 | 55-86 | 7 | 30 |
| Batch number: 141390015A | Sample number(s): 7462597 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 69 | 65* | 67-109 | 7 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 75 | 72 | 71-119 | 4 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 74* | 72* | 75-117 | 3 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 57 | 58 | 44-134 | 1 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 49* | 44* | 55-86 | 12 | 30 |
| Batch number: 141410016A | Sample number(s): 7462590-7462591 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 117* | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 120 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 119 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 66 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 60-115 | | |
| Batch number: 141410017A | Sample number(s): 7462590-7462591 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 71* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 74* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 73* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 53 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 57* | | 60-115 | | |
| Batch number: 141340637004 | Sample number(s): 7462589-7462591 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 102 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 108 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 1.15 | J | 10.0 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 104 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 13.6 J | 20.0 | 3.34 | mg/kg | 103 | | 80-120 | | |
| Chromium | 3.00 U | 3.00 | 0.160 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 U | 3.00 | 0.500 | mg/kg | 108 | | 80-120 | | |
| Lithium | 4.0 U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 U | 10.0 | 1.67 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 U | 10.0 | 2.89 | mg/kg | 104 | | 80-120 | | |
| Potassium | 100 U | 100. | 8.34 | mg/kg | 101 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.35 J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 U | 1.00 | 0.130 | mg/kg | 103 | | 80-120 | | |
| Zinc | 0.568 J | 4.00 | 0.200 | mg/kg | 103 | | 80-120 | | |
| Zirconium | 5.00 U | 5.00 | 0.840 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141340637004A | Sample number(s): 7462589-7462591 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0260 | mg/kg | 109 | | 80-120 | | |
| Strontium | 0.0750 J | 0.400 | 0.0680 | mg/kg | 100 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141340637004B | Sample number(s): 7462589-7462591 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 109 | | 80-120 | | |
| Batch number: 141350635001 | Sample number(s): 7462597 | | | | | | | | |
| Aluminum | 0.400 U | 0.400 | 0.0828 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Antimony | 0.0400 U | 0.0400 | 0.0053 | mg/l | 106 | 103 | 88-111 | 3 | 20 |
| Arsenic | 0.0400 U | 0.0400 | 0.0068 | mg/l | 106 | 102 | 90-113 | 4 | 20 |
| Barium | 0.0100 U | 0.0100 | 0.00033 | mg/l | 105 | 105 | 90-110 | 0 | 20 |
| Beryllium | 0.0100 U | 0.0100 | 0.00067 | mg/l | 103 | 103 | 90-111 | 0 | 20 |
| Boron | 0.100 U | 0.100 | 0.0084 | mg/l | 99 | 99 | 90-110 | 0 | 20 |
| Cadmium | 0.0100 U | 0.0100 | 0.00076 | mg/l | 105 | 102 | 90-112 | 3 | 20 |
| Calcium | 0.400 U | 0.400 | 0.0334 | mg/l | 103 | 101 | 90-112 | 1 | 20 |
| Chromium | 0.0300 U | 0.0300 | 0.0016 | mg/l | 102 | 101 | 90-110 | 0 | 20 |
| Cobalt | 0.0100 U | 0.0100 | 0.0013 | mg/l | 108 | 105 | 90-110 | 3 | 20 |
| Copper | 0.0200 U | 0.0200 | 0.0027 | mg/l | 107 | 107 | 90-112 | 0 | 20 |
| Iron | 0.400 U | 0.400 | 0.0430 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0047 | mg/l | 109 | 106 | 88-116 | 3 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0047 | mg/l | 103 | 103 | 90-110 | 1 | 20 |
| Magnesium | 0.200 U | 0.200 | 0.0167 | mg/l | 101 | 100 | 89-110 | 1 | 20 |
| Manganese | 0.0016 J | 0.0100 | 0.00083 | mg/l | 106 | 106 | 90-110 | 0 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0017 | mg/l | 106 | 103 | 90-110 | 3 | 20 |
| Nickel | 0.0200 U | 0.0200 | 0.0015 | mg/l | 111 | 108 | 90-111 | 3 | 20 |
| Phosphorus | 0.200 U | 0.200 | 0.0418 | mg/l | 103 | 101 | 90-110 | 2 | 20 |
| Potassium | 1.00 U | 1.00 | 0.0980 | mg/l | 101 | 100 | 90-110 | 0 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 103 | 102 | 87-114 | 1 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0029 | mg/l | 103 | 100 | 90-110 | 3 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 104 | 104 | 90-113 | 0 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0020 | mg/l | 105 | 104 | 90-110 | 1 | 20 |
| Zinc | 0.0038 J | 0.0400 | 0.0020 | mg/l | 105 | 102 | 90-110 | 3 | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Zirconium | 0.100 U | 0.100 | 0.0084 | mg/l | 102 | 102 | 90-110 | 1 | 20 |
| Batch number: 141350638001 | Sample number(s): 7462589-7462591 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 91 | | 85-120 | | |
| Batch number: 141350639001A | Sample number(s): 7462597 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 102 | 101 | 90-115 | 1 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 101 | 99 | 90-110 | 2 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 107 | 102 | 90-115 | 4 | 20 |
| Batch number: 141350639001B | Sample number(s): 7462597 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 109 | 133* | 90-114 | 20 | 20 |
| Batch number: 141355713005 | Sample number(s): 7462597 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00006 0 | mg/l | 98 | 101 | 90-115 | 3 | 20 |
| Batch number: 14134039402A | Sample number(s): 7462589-7462591 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14135002101A | Sample number(s): 7462597 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 100 | | 90-110 | | |
| Batch number: 14136162401B | Sample number(s): 7462589-7462591 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14136003 | Sample number(s): 7462597 | | | | | | | | |
| 2378-TCDD | 0.258 J | 2.00 | 0.252 | pg/l | 89 | | 60-150 | | |
| 12378-PeCDD | 0.307 J | 10.0 | 0.220 | pg/l | 89 | | 60-150 | | |
| 123478-HxCDD | 0.303 J | 10.0 | 0.162 | pg/l | 89 | | 60-150 | | |
| 123678-HxCDD | 0.312 J | 10.0 | 0.172 | pg/l | 89 | | 60-150 | | |
| 123789-HxCDD | 0.356 J | 10.0 | 0.171 | pg/l | 91 | | 60-150 | | |
| 1234678-HpCDD | 1.08 J | 10.0 | 0.186 | pg/l | 90 | | 60-150 | | |
| OCDD | 5.19 J | 20.0 | 0.271 | pg/l | 85 | | 60-150 | | |
| 2378-TCDF | 2.00 U | 2.00 | 0.174 | pg/l | 85 | | 60-150 | | |
| 12378-PeCDF | 0.466 J | 10.0 | 0.120 | pg/l | 88 | | 60-150 | | |
| 23478-PeCDF | 0.402 J | 10.0 | 0.110 | pg/l | 90 | | 60-150 | | |
| 123478-HxCDF | 0.418 J | 10.0 | 0.110 | pg/l | 91 | | 60-150 | | |
| 123678-HxCDF | 0.243 J | 10.0 | 0.108 | pg/l | 91 | | 60-150 | | |
| 123789-HxCDF | 0.445 J | 10.0 | 0.108 | pg/l | 89 | | 60-150 | | |
| 234678-HxCDF | 0.153 J | 10.0 | 0.101 | pg/l | 90 | | 60-150 | | |
| 1234678-HpCDF | 0.515 J | 10.0 | 0.0885 | pg/l | 90 | | 60-150 | | |
| 1234789-HpCDF | 0.574 J | 10.0 | 0.0907 | pg/l | 89 | | 60-150 | | |
| OCDF | 1.10 J | 20.0 | 0.202 | pg/l | 86 | | 60-150 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0940 | | | pg/l | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14140SLA026 | Sample number(s): 7462589-7462591 UNSPK: P461254 | | | | | | | | |
| Acenaphthene | 98 | 92 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 103 | 95 | 60-128 | 8 | 30 | | | | |
| Anthracene | 97 | 93 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 98 | 100 | 44-143 | 2 | 30 | | | | |
| Benzo(a)pyrene | 84 | 82 | 49-137 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 96 | 96 | 26-142 | 0 | 30 | | | | |
| Benzo(e)pyrene | 78 | 73 | 63-111 | 6 | 30 | | | | |
| Benzo(g,h,i)perylene | 48 | 42 | 33-141 | 12 | 30 | | | | |
| Benzo(k)fluoranthene | 91 | 85 | 49-144 | 6 | 30 | | | | |
| Butylbenzylphthalate | 112 | 108 | 64-156 | 4 | 30 | | | | |
| Di-n-butylphthalate | 114 | 107 | 52-147 | 7 | 30 | | | | |
| Chrysene | 91 | 89 | 43-141 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 66 | 58 | 25-145 | 13 | 30 | | | | |
| Diethylphthalate | 102 | 92 | 66-140 | 10 | 30 | | | | |
| Dimethylphthalate | 100 | 91 | 70-123 | 10 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 99 | 94 | 48-164 | 4 | 30 | | | | |
| Fluoranthene | 93 | 93 | 38-153 | 0 | 30 | | | | |
| Fluorene | 94 | 89 | 57-130 | 6 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 69 | 52 | 26-139 | 26 | 30 | | | | |
| 1-Methylnaphthalene | 94 | 85 | 59-139 | 9 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 89 | 46-147 | 7 | 30 | | | | |
| Naphthalene | 94 | 88 | 52-136 | 6 | 30 | | | | |
| N-Nitrosodimethylamine | 85 | 82 | 39-134 | 4 | 30 | | | | |
| Di-n-octylphthalate | 134 | 128 | 52-162 | 5 | 30 | | | | |
| Phenanthrene | 102 | 95 | 50-137 | 6 | 30 | | | | |
| Pyrene | 86 | 91 | 26-143 | 4 | 30 | | | | |
| Batch number: 14141A16A | Sample number(s): 7462590-7462591 UNSPK: P470316 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 80 | 87 | 69-123 | 15 | 30 | | | | |
| Batch number: 141360001A | Sample number(s): 7462589 UNSPK: P457971 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 108 | 111 | 80-120 | 3 | 20 | | | | |
| Batch number: 141390018A | Sample number(s): 7462597 UNSPK: 7462597 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 98 | 100 | 80-120 | 2 | 20 | | | | |
| Batch number: 141360028A | Sample number(s): 7462589-7462591 UNSPK: P461254 | | | | | | | | |
| PCB-1016 | 91 | 92 | 41-135 | 3 | 50 | | | | |
| PCB-1260 | 107 | 110 | 40-134 | 3 | 50 | | | | |
| Batch number: 141410016A | Sample number(s): 7462590-7462591 UNSPK: P470316 | | | | | | | | |
| EFH (C12-C14) | 108 | 96 | 49-123 | 12 | 20 | | | | |
| EFH (C15-C20) | 112 | 99 | 49-123 | 12 | 20 | | | | |
| EFH (C21-C30) | 115 | 98 | 49-123 | 16 | 20 | | | | |
| EFH (C30-C40) | 114 | 75 | 49-123 | 42* | 20 | | | | |
| EFH (C8-C11) | 90 | 88 | 49-123 | 2 | 20 | | | | |
| Batch number: 141410017A | Sample number(s): 7462590-7462591 UNSPK: P470316 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 72 | 70 | 49-123 | 3 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 74 | 71 | 49-123 | 4 | 20 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| EFH C21-C30 w/ SiGel | 73 | 71 | 49-123 | 3 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 62 | 58 | 49-123 | 7 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 60 | 64 | 49-123 | 5 | 20 | | | | |
| Batch number: 141340637004 | Sample number(s): 7462589-7462591 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Aluminum | 3014 (2) | 2861 (2) | 75-125 | 2 | 20 | 13,000 | 12,600 | 4 | 20 |
| Antimony | 47* | 45* | 75-125 | 4 | 20 | 3.85 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 104 | 106 | 75-125 | 2 | 20 | 5.42 | 5.66 | 4 (1) | 20 |
| Barium | 105 | 106 | 75-125 | 1 | 20 | 70.9 | 64.6 | 9 | 20 |
| Beryllium | 103 | 104 | 75-125 | 0 | 20 | 0.543 J | 0.519 J | 4 (1) | 20 |
| Boron | 99 | 101 | 75-125 | 2 | 20 | 1.68 J | 1.41 J | 17 (1) | 20 |
| Cadmium | 95 | 98 | 75-125 | 3 | 20 | 0.962 U | 0.971 U | 0 (1) | 20 |
| Calcium | 369 (2) | 365 (2) | 75-125 | 0 | 20 | 3,160 | 2,780 | 13 | 20 |
| Chromium | 127* | 128* | 75-125 | 1 | 20 | 15.8 | 15.8 | 0 | 20 |
| Cobalt | 98 | 94 | 75-125 | 4 | 20 | 4.73 | 4.51 | 5 (1) | 20 |
| Copper | 120 | 136* | 75-125 | 9 | 20 | 11.2 | 10.9 | 3 | 20 |
| Iron | 3011 (2) | 3164 (2) | 75-125 | 1 | 20 | 18,700 | 17,800 | 5 | 20 |
| Lead | 106 | 115 | 75-125 | 5 | 20 | 8.38 | 7.78 | 7 (1) | 20 |
| Lithium | 104 | 104 | 75-125 | 0 | 20 | 21.6 | 21.2 | 2 | 20 |
| Magnesium | 468 (2) | 442 (2) | 75-125 | 1 | 20 | 3,870 | 3,750 | 3 | 20 |
| Manganese | 198 (2) | 96 (2) | 75-125 | 14 | 20 | 288 | 226 | 24* | 20 |
| Molybdenum | 91 | 91 | 75-125 | 0 | 20 | 0.420 J | 0.214 J | 65* (1) | 20 |
| Nickel | 97 | 102 | 75-125 | 4 | 20 | 12.7 | 12.0 | 6 | 20 |
| Phosphorus | 125 | 154* | 75-125 | 7 | 20 | 260 | 258 | 1 | 20 |
| Potassium | 155* | 150* | 75-125 | 1 | 20 | 2,210 | 2,130 | 4 | 20 |
| Sodium | 98 | 99 | 75-125 | 0 | 20 | 84.1 J | 80.3 J | 5 (1) | 20 |
| Tin | 85 | 85 | 75-125 | 0 | 20 | 2.84 J | 2.62 J | 8 (1) | 20 |
| Titanium | 363 (2) | 380 (2) | 75-125 | 1 | 20 | 923 | 886 | 4 | 20 |
| Vanadium | 116 | 118 | 75-125 | 1 | 20 | 34.5 | 33.0 | 4 | 20 |
| Zinc | 161* | 237* | 75-125 | 22* | 20 | 72.0 | 70.1 | 3 | 20 |
| Zirconium | 98 | 97 | 75-125 | 1 | 20 | 2.95 J | 3.20 J | 8 (1) | 20 |
| Batch number: 141340637004A | Sample number(s): 7462589-7462591 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Silver | 105 | 101 | 75-125 | 3 | 20 | 0.0285 J | 0.0266 J | 7 (1) | 20 |
| Strontium | 221* | 184* | 75-125 | 7 | 20 | 27.2 | 23.5 | 15 | 20 |
| Thallium | 116 | 102 | 75-125 | 8 | 20 | 0.262 | 0.225 | 15 (1) | 20 |
| Batch number: 141340637004B | Sample number(s): 7462589-7462591 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| Selenium | 101 | 111 | 75-125 | 9 | 20 | 0.144 J | 0.159 J | 10 (1) | 20 |
| Batch number: 141350638001 | Sample number(s): 7462589-7462591 UNSPK: P457971 BKG: P457971 | | | | | | | | |
| 3a Mercury 7471A | 104 | 101 | 65-135 | 1 | 20 | 0.0132 J | 0.0148 J | 12 (1) | 20 |
| Batch number: 14134039402A | Sample number(s): 7462589-7462591 BKG: 7462591 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.98 | 8.02 | 0 | 3 |
| Batch number: 14135002101A | Sample number(s): 7462597 BKG: P462231 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 6.7 | 6.9 | 2 | 3 |
| Batch number: 14136162401B | Sample number(s): 7462589-7462591 BKG: P462593 | | | | | | | | |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | | 8.1 | 8.0 | 1 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141392AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7462597 | 99 | 101 | 99 | 96 |
| Blank | 99 | 100 | 99 | 95 |
| LCS | 99 | 102 | 100 | 100 |
| LCSD | 98 | 102 | 101 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14140SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7462589 | 83 | 95 | 79 |
| 7462590 | 85 | 101 | 82 |
| 7462591 | 100 | 113 | 89 |
| Blank | 91 | 104 | 83 |
| LCS | 93 | 109 | 85 |
| MS | 87 | 98 | 84 |
| MSD | 85 | 90 | 79 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14142WAE026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7462597 | 101 | 115 | 88 |
| Blank | 99 | 114 | 83 |
| LCS | 102 | 118 | 92 |
| LCSD | 105 | 118 | 93 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14141A16A

| | Trifluorotoluene-F |
|---|---|

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7462590 | 80 | |
| 7462591 | 86 | |
| Blank | 99 | |
| LCS | 100 | |
| MS | 87 | |
| MSD | 95 | |
| Limits: | 50-142 | |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14142A94A

| | Trifluorotoluene-F |
|---|---|
| 7462588 | 86 |
| 7462597 | 86 |
| Blank | 86 |
| LCS | 97 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141360028A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7462589 | 99 | 102 |
| 7462590 | 102 | 102 |
| 7462591 | 99 | 98 |
| Blank | 102 | 107 |
| LCS | 107 | 106 |
| LCSD | 103 | 108 |
| MS | 98 | 104 |
| MSD | 99 | 107 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141400007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7462597 | 87 | 77 |
| Blank | 98 | 98 |
| LCS | 100 | 79 |
| LCSD | 96 | 77 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141390014A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7462597 | 68 | 83 |
| Blank | 66 | 80 |
| LCS | 86 | 80 |
| LCSD | 65 | 78 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

## Surrogate Quality Control

Limits: 45-126 69-119

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141390015A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7462597 | 66 | 71 |
| Blank | 64 | 71 |
| LCS | 67 | 72 |
| LCSD | 62 | 68* |

Limits: 45-126 69-119

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141410016A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7462590 | 96 | 95 |
| 7462591 | 83 | 96 |
| Blank | 94 | 106 |
| LCS | 96 | 116 |
| MS | 94 | 106 |
| MSD | 86 | 94 |

Limits: 37-125 66-123

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141410017A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7462590 | 69 | 65* |
| 7462591 | 65 | 72 |
| Blank | 76 | 83 |
| LCS | 62 | 72 |
| MS | 65 | 72 |
| MSD | 66 | 72 |

Limits: 37-125 66-123

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14136003

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7462597 | 79 | 83 | 89 | 86 | 87 | 95 |
| Blank | 86 | 89 | 92 | 94 | 92 | 103 |
| OPR | 83 | 91 | 94 | 92 | 92 | 96 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7462597 | 95 | 83 | 88 | 88 | 91 | 92 |
| Blank | 91 | 90 | 96 | 94 | 97 | 98 |
| OPR | 100 | 85 | 95 | 96 | 93 | 93 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474152
Reported: 07/03/14 at 04:43 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7462597 | 91 | 91 | 94 | 95 | 93 | |
| Blank | 98 | 101 | 100 | 106 | 96 | |
| OPR | 95 | 107 | 98 | 100 | 100 | |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

A-13013 G-1474152
S-7462588-97

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 5/13/2014 | Contact Name: | Pam Hartman | COC No: | 20140513-01 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1 |
| AirbillNo: | 798848021746 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB1-051314 | 5/13/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG-SL-756-SA5C-SB-15.0-16.0 | 5/13/14 09:20 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-756-SA5C-SB-15.0-16.0 | 5/13/14 09:20 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-836-SA5B-SB-15.0-16.0 | 5/13/14 11:00 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | For all EFH, silica gel |
| FDG-SL-836-SA5B-SB-15.0-16.0 | 5/13/14 11:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | cleanup required on 1/2 |
| FDG-SL-836-SA5B-SB-19.0-20.0 | 5/13/14 11:20 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | the extract. Analyze both |
| FDG-SL-836-SA5B-SB-19.0-20.0 | 5/13/14 11:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | extracts for EFH. |

Special Instructions:

**Sampler:** Whitney Treadway

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steve Myse | 05/13/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5.14.14 | 950 |

A-13013 G-147415Z S-746258-97

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/13/2014
CarrierName: FedEx
AirbillNo: 798848021746

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140513-03
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc_Nitrate_Nitrite_TKN | TOC SM 5310B | Grain_Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FB-051314 | 5/13/14 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | For EFH, silica gel cleanup |
| FB-051314 | 5/13/14 15:00 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | required on 1/2 the extract. |
| FB-051314 | 5/13/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | Analyze both extracts for EFH. |
| FB-051314 | 5/13/14 15:00 | WQ | None | 1 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FB-051314 | 5/13/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| FB-051314 | 5/13/14 15:00 | WQ | HCl | 6 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | X | X | X | | | | | | | | | | | | | | | |
| FB-051314 | 5/13/14 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pa Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Peggy Myers | 5/13/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Brian Bm | 5.14.14 | 950 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14419

Group Number(s): 1474152

Client: CDM

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/14/2014 9:50 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 11:13 on 05/14/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/15/2014
Group Number: 1474671
SDG: PH177
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| EB1-051414 Water | 7465088 |
| EB2-051414 Water | 7465089 |
| TB1-051414 Water | 7465090 |
| FDG-SL-841-SA5B-SB-0.0-0.5 Soil | 7465091 |
| FDG-SL-841-SA5B-SB-4.0-5.0 Soil | 7465092 |
| FDG-SL-841-SA5B-SB-9.0-10.0 Soil | 7465093 |
| FDG-SL-757-SA5C-SB-0.0-0.5 Soil | 7465094 |
| FDG-SL-757-SA5C-SB-4.0-5.0 Soil | 7465095 |
| FDG-SL-757-SA5C-SB-8.0-9.0 Soil | 7465096 |
| FDG-SL-842-SA5B-SB-0.0-0.5 Soil | 7465097 |
| FDG-SL-842-SA5B-SB-4.0-5.0 Soil | 7465098 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: EB1-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465088**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:00 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7701 SDG#: PH177-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.057 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.27 | J | 1.1 | 0.057 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.082 | J | 1.1 | 0.057 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.057 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.49 | J | 1.1 | 0.057 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.057 | U | 0.057 | 0.034 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.057 | U | 0.057 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.057 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.057 | U | 0.057 | 0.034 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.057 | U | 0.057 | 0.011 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/l | | ug/l | ug/l | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 6.4 | | 1.0 | 0.20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.41 | U | 0.41 | 0.091 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.41 | U | 0.41 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.41 | U | 0.41 | 0.083 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.41 | U | 0.41 | 0.12 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.41 | U | 0.41 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.41 | U | 0.41 | 0.13 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465088**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:00 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7701 SDG#: PH177-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.49 U | 0.49 | 0.098 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.098 U | 0.098 | 0.049 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.49 U | 0.49 | 0.098 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.098 U | 0.098 | 0.049 | 1 |

The reverse surrogate, capric acid, is present at <1%.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.00034 J | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.0106 J | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0029 J | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465088**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:00 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7701 SDG#: PH177-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.8 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465088**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:00 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7701 SDG#: PH177-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | 2378-TCDD | 1746-01-6 | 0.210 | JB | 2.06 | 0.200 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 10.3 | U | 10.3 | 0.163 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.237 | JBQ | 10.3 | 0.126 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 10.3 | U | 10.3 | 0.133 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.308 | JBQ | 10.3 | 0.130 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.259 | JB | 10.3 | 0.0986 | 1 |
| 10915 | OCDD | 3268-87-9 | 5.72 | JBQ | 20.6 | 0.201 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 0.156 | JQ | 2.06 | 0.0981 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 10.3 | U | 10.3 | 0.0771 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.156 | JBQ | 10.3 | 0.0708 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.184 | JBQ | 10.3 | 0.0756 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.0756 | JBQ | 10.3 | 0.0738 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.209 | JBQ | 10.3 | 0.0819 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.123 | JBQ | 10.3 | 0.0750 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.328 | JBQ | 10.3 | 0.0397 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.217 | JB | 10.3 | 0.0437 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.700 | JBQ | 20.6 | 0.140 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.214 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 84 | 17 - 157 |
| 13C12-2378-TCDF | 89 | 24 - 169 |
| 13C12-12378-PeCDF | 92 | 24 - 185 |
| 13C12-23478-PeCDF | 93 | 21 - 178 |
| 13C12-123478-HxCDF | 93 | 26 - 152 |
| 13C12-123678-HxCDF | 94 | 26 - 123 |
| 13C12-234678-HxCDF | 94 | 28 - 136 |
| 13C12-123789-HxCDF | 97 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 95 | 26 - 138 |
| 13C12-OCDF | 90 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465088**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:00 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7701 SDG#: PH177-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465088**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:00 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7701 SDG#: PH177-01EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140WAB026 | 05/23/2014 18:51 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14140WAB026 | 05/20/2014 19:00 | Nicholas W Shroyer | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141390018A | 05/19/2014 17:35 | Richard A Shober | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141400007A | 05/22/2014 11:55 | Jessica L Miller | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141400007A | 05/20/2014 18:00 | David V Hershey Jr | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141390014A | 05/20/2014 04:04 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141390015A | 05/20/2014 18:30 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141390015A | 05/19/2014 16:35 | JoElla L Rice | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141390014A | 05/19/2014 16:35 | JoElla L Rice | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14136003 | 05/21/2014 06:41 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14136003 | 05/17/2014 11:00 | Chin F Ly | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465088**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:00 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7701 SDG#: PH177-01EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10144 | Zirconium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:21 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141390639001B | 05/20/2014 21:09 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141390639001A | 05/20/2014 21:09 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141390639001A | 05/20/2014 21:09 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141390639001A | 05/20/2014 21:09 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141415713001 | 05/22/2014 06:51 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141390635001 | 05/20/2014 10:03 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141390639001 | 05/20/2014 09:34 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141395713003 | 05/20/2014 11:45 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 2 | 141415713001 | 05/21/2014 23:55 | Annamaria Kuhns | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14136002101A | 05/16/2014 10:14 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465089**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:30 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7702 SDG#: PH177-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.26 | J | 1.1 | 0.053 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.084 | J | 1.1 | 0.053 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.11 | J | 1.1 | 0.053 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 | U | 0.053 | 0.011 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/l | | ug/l | ug/l | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 0.40 | J | 1.0 | 0.20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.40 | U | 0.40 | 0.081 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.40 | U | 0.40 | 0.081 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.40 | U | 0.40 | 0.089 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.40 | U | 0.40 | 0.081 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.40 | U | 0.40 | 0.081 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.40 | U | 0.40 | 0.16 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.40 | U | 0.40 | 0.081 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.40 | U | 0.40 | 0.081 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.40 | U | 0.40 | 0.081 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.40 | U | 0.40 | 0.12 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.40 | U | 0.40 | 0.16 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465089**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:30 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7702 SDG#: PH177-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | |
| 13092 | PCB-1268 | 11100-14-4 | 0.40 | U | 0.40 | 0.13 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/l | | mg/l | mg/l | |
| 10365 | EFH (C12-C14) | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.49 | U | 0.49 | 0.097 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.49 | U | 0.49 | 0.097 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.049 | 1 |

The reverse surrogate, capric acid, is present at <1%.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | mg/l | | mg/l | mg/l | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 | U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 | U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 | U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 | U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 0.114 | J | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 | U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 | U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 | U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 | U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 | U | 0.0400 | 0.0020 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465089**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:30 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7702 SDG#: PH177-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.8 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465089**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:30 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7702 SDG#: PH177-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | 2378-TCDD | 1746-01-6 | 2.24 | U | 2.24 | 0.238 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.412 | JBQ | 11.2 | 0.229 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.185 | JBQ | 11.2 | 0.144 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 11.2 | U | 11.2 | 0.144 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.316 | JBQ | 11.2 | 0.149 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.945 | JB | 11.2 | 0.157 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.42 | JBQ | 22.4 | 0.209 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 2.24 | U | 2.24 | 0.158 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.405 | JBQ | 11.2 | 0.100 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.122 | JBQ | 11.2 | 0.0986 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 11.2 | U | 11.2 | 0.0817 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.275 | JBQ | 11.2 | 0.0811 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.260 | JB | 11.2 | 0.0739 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.237 | JBQ | 11.2 | 0.0794 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.349 | JBQ | 11.2 | 0.0558 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.206 | JB | 11.2 | 0.0631 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.09 | JB | 22.4 | 0.172 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0378 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 84 | 24 - 169 |
| 13C12-12378-PeCDF | 97 | 24 - 185 |
| 13C12-23478-PeCDF | 90 | 21 - 178 |
| 13C12-123478-HxCDF | 89 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 91 | 28 - 136 |
| 13C12-123789-HxCDF | 107 | 29 - 147 |
| 13C12-1234678-HpCDF | 92 | 28 - 143 |
| 13C12-1234789-HpCDF | 89 | 26 - 138 |
| 13C12-OCDF | 85 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465089**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:30 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7702 SDG#: PH177-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465089**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:30 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7702 SDG#: PH177-02EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140WAB026 | 05/23/2014 19:20 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14140WAB026 | 05/20/2014 19:00 | Nicholas W Shroyer | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 13:18 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 13:18 | Marie D Beamenderfer | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141390018A | 05/19/2014 17:48 | Richard A Shober | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141400007A | 05/22/2014 12:13 | Jessica L Miller | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141400007A | 05/20/2014 18:00 | David V Hershey Jr | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141390014A | 05/20/2014 04:26 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141390015A | 05/20/2014 18:52 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141390015A | 05/19/2014 16:35 | JoElla L Rice | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141390014A | 05/19/2014 16:35 | JoElla L Rice | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14136003 | 05/21/2014 07:38 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14136003 | 05/17/2014 11:00 | Chin F Ly | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051414 Water**
**SSFL Phase 3 Subarea 5B/C**

**LL Sample # WW 7465089**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 15:30 by PH

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7702 SDG#: PH177-02EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07069 | Tin | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141390635001 | 05/20/2014 22:25 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141390639001B | 05/20/2014 21:12 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141390639001A | 05/20/2014 21:12 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141390639001A | 05/20/2014 21:12 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141390639001A | 05/20/2014 21:12 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141415713001 | 05/22/2014 06:53 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141390635001 | 05/20/2014 10:03 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141390639001 | 05/20/2014 09:34 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141395713003 | 05/20/2014 11:45 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 2 | 141415713001 | 05/21/2014 23:55 | Annamaria Kuhns | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14136002101A | 05/16/2014 10:18 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB1-051414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7465090**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 08:00

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7703 SDG#: PH177-03TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 13:44 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 13:44 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465091**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7704 SDG#: PH177-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.7 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 130 | | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465091**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7704 SDG#: PH177-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,500 | | 40.0 | 7.22 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.00 | U | 4.00 | 0.741 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.04 | J | 4.00 | 0.701 | 1 |
| 06946 | Barium | 7440-39-3 | 93.4 | | 1.00 | 0.0330 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.692 | J | 1.00 | 0.0671 | 1 |
| 07914 | Boron | 7440-42-8 | 10.0 | U | 10.0 | 0.841 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.00 | U | 1.00 | 0.0761 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,000 | | 20.0 | 3.34 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.5 | | 3.00 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.71 | | 1.00 | 0.0991 | 1 |
| 06953 | Copper | 7440-50-8 | 14.6 | | 2.00 | 0.290 | 1 |
| 01654 | Iron | 7439-89-6 | 24,900 | | 40.0 | 3.62 | 1 |
| 06955 | Lead | 7439-92-1 | 10.7 | | 3.00 | 0.500 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.5 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,300 | | 10.0 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 342 | | 1.00 | 0.0831 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.446 | J | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.2 | | 2.00 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 407 | | 10.0 | 2.89 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,810 | | 100 | 8.35 | 1 |
| 01667 | Sodium | 7440-23-5 | 213 | | 100 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.69 | J | 10.0 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,320 | | 1.00 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 43.3 | | 1.00 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.6 | | 4.00 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.31 | J | 5.00 | 0.841 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.400 | U | 0.400 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0309 | J | 0.200 | 0.0260 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.1 | | 0.400 | 0.0681 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.268 | | 0.200 | 0.0300 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0171 | U | 0.0171 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.30 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.8 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465091**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7704 SDG#: PH177-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-841-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7465091**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7704 SDG#: PH177-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.999 | U | 0.999 | 0.0652 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.99 | U | 4.99 | 0.0836 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 4.99 | U | 4.99 | 0.0392 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0953 | JQ | 4.99 | 0.0371 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.170 | JQ | 4.99 | 0.0367 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.938 | JB | 4.99 | 0.0534 | 1 |
| 11031 | OCDD | 3268-87-9 | 10.5 | B | 9.99 | 0.0381 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0638 | JQ | 0.999 | 0.0483 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 2.47 | JB | 4.99 | 0.0380 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.110 | JQ | 4.99 | 0.0369 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.132 | JQ | 4.99 | 0.0417 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0375 | JQ | 4.99 | 0.0364 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.104 | J | 4.99 | 0.0387 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0626 | JQ | 4.99 | 0.0372 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.330 | JB | 4.99 | 0.0281 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0876 | JQ | 4.99 | 0.0426 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.878 | JBQ | 9.99 | 0.0570 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.100 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 69 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 63 | 21 - 178 |
| 13C12-123478-HxCDF | 63 | 26 - 152 |
| 13C12-123678-HxCDF | 68 | 26 - 123 |
| 13C12-234678-HxCDF | 66 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465091**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7704 SDG#: PH177-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465091**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7704 SDG#: PH177-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 06:50 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 01:12 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 22:25 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 22:46 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/22/2014 22:49 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 19:51 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:11 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465091**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7704 SDG#: PH177-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:00 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:00 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:00 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:00 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:00 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465092**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7705 SDG#: PH177-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.52 | J | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.2 | J | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.8 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 22.81 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465092**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7705 SDG#: PH177-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 3.7 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 9.3 | J | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,000 | | 43.0 | 7.74 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.30 | U | 4.30 | 0.795 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.99 | J | 4.30 | 0.752 | 1 |
| 06946 | Barium | 7440-39-3 | 103 | | 1.07 | 0.0354 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.645 | J | 1.07 | 0.0720 | 1 |
| 07914 | Boron | 7440-42-8 | 0.976 | J | 10.7 | 0.902 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.07 | U | 1.07 | 0.0816 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,370 | | 21.5 | 3.59 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.6 | | 3.22 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.85 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 15.5 | | 2.15 | 0.311 | 1 |
| 01654 | Iron | 7439-89-6 | 22,400 | | 43.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 9.82 | | 3.22 | 0.537 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.2 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,660 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 322 | | 1.07 | 0.0891 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.412 | J | 2.15 | 0.183 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.7 | | 2.15 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 361 | | 10.7 | 3.10 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,340 | | 107 | 8.96 | 1 |
| 01667 | Sodium | 7440-23-5 | 165 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.35 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,250 | | 1.07 | 0.183 | 1 |
| 06971 | Vanadium | 7440-62-2 | 41.1 | | 1.07 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.4 | | 4.30 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.52 | J | 5.37 | 0.902 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.430 | U | 0.430 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0287 | J | 0.215 | 0.0279 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.4 | | 0.430 | 0.0730 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.261 | | 0.215 | 0.0322 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0203 | | 0.0175 | 0.0105 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465092**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7705 SDG#: PH177-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 8.52 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.6 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465092**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7705 SDG#: PH177-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.123 | JQ | 1.07 | 0.0807 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.210 | JQ | 5.34 | 0.0550 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0809 | JQ | 5.34 | 0.0466 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.341 | J | 5.34 | 0.0459 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.541 | J | 5.34 | 0.0445 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.212 | JBQ | 5.34 | 0.0411 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.69 | JB | 10.7 | 0.0349 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.156 | J | 1.07 | 0.0553 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.465 | JBQ | 5.34 | 0.0324 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.265 | J | 5.34 | 0.0329 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.164 | JQ | 5.34 | 0.0345 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.158 | J | 5.34 | 0.0303 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.337 | J | 5.34 | 0.0351 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0989 | JQ | 5.34 | 0.0336 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.115 | JBQ | 5.34 | 0.0147 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0517 | JQ | 5.34 | 0.0261 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.281 | JBQ | 10.7 | 0.0675 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.233 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 69 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 63 | 21 - 178 |
| 13C12-123478-HxCDF | 65 | 26 - 152 |
| 13C12-123678-HxCDF | 70 | 26 - 123 |
| 13C12-234678-HxCDF | 66 | 28 - 136 |
| 13C12-123789-HxCDF | 68 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 57 | 26 - 138 |
| 13C12-OCDF | 48 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465092**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7705 SDG#: PH177-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465092**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7705 SDG#: PH177-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 07:22 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/21/2014 20:47 | Laura M Krieger | 22.81 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201413534510 | 05/15/2014 19:44 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201413534510 | 05/15/2014 19:44 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 01:30 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 18:05 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 18:27 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/23/2014 02:49 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 19:55 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465092**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7705 SDG#: PH177-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:15 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:02 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:02 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:02 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:02 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:02 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465093**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7706 SDG#: PH177-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.85 | J | 1.8 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.4 | J | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.78 | J | 1.8 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.46 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465093**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7706 SDG#: PH177-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 30,300 | | 42.5 | 7.66 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.25 | U | 4.25 | 0.786 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.07 | J | 4.25 | 0.744 | 1 |
| 06946 | Barium | 7440-39-3 | 182 | | 1.06 | 0.0351 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.75 | | 1.06 | 0.0712 | 1 |
| 07914 | Boron | 7440-42-8 | 53.1 | U | 53.1 | 4.46 | 5 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0807 | 1 |
| 01650 | Calcium | 7440-70-2 | 11,000 | | 21.2 | 3.55 | 1 |
| 06951 | Chromium | 7440-47-3 | 37.9 | | 3.19 | 0.170 | 1 |
| 06952 | Cobalt | 7440-48-4 | 10.5 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 34.6 | | 2.12 | 0.308 | 1 |
| 01654 | Iron | 7439-89-6 | 53,000 | | 212 | 19.2 | 5 |
| 06955 | Lead | 7439-92-1 | 24.4 | | 3.19 | 0.531 | 1 |
| 01656 | Lithium | 7439-93-2 | 69.2 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 11,900 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 461 | | 1.06 | 0.0882 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.295 | J | 2.12 | 0.181 | 1 |
| 06961 | Nickel | 7440-02-0 | 24.9 | | 2.12 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 620 | | 10.6 | 3.07 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,480 | | 106 | 8.86 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,440 | | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 6.02 | J | 10.6 | 0.234 | 1 |
| 06970 | Titanium | 7440-32-6 | 2,170 | | 5.31 | 0.903 | 5 |
| 06971 | Vanadium | 7440-62-2 | 73.8 | | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 126 | | 4.25 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.51 | J | 5.31 | 0.892 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.174 | J | 0.425 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.202 | J | 0.212 | 0.0276 | 2 |
| 06144 | Strontium | 7440-24-6 | 74.5 | | 0.425 | 0.0722 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.495 | | 0.212 | 0.0319 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0175 | U | 0.0175 | 0.0105 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465093**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7706 SDG#: PH177-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.1 C. | n.a. | 8.26 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 9.5 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465093**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7706 SDG#: PH177-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.131 | JQ | 1.06 | 0.0894 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.207 | J | 5.32 | 0.0618 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.32 | U | 5.32 | 0.0456 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0701 | J | 5.32 | 0.0470 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.124 | JQ | 5.32 | 0.0480 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.182 | JBQ | 5.32 | 0.0435 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.684 | JBQ | 10.6 | 0.0351 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0488 | JQ | 1.06 | 0.0476 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.215 | JBQ | 5.32 | 0.0337 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.132 | JQ | 5.32 | 0.0328 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.100 | JQ | 5.32 | 0.0305 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0727 | JQ | 5.32 | 0.0268 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0302 | JQ | 5.32 | 0.0256 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0534 | JQ | 5.32 | 0.0282 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0286 | JBQ | 5.32 | 0.0143 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0495 | J | 5.32 | 0.0233 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.135 | JBQ | 10.6 | 0.0547 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.215 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 73 | 28 - 130 |
| 13C12-123789-HxCDD | 75 | 28 - 130 |
| 13C12-1234678-HpCDD | 75 | 23 - 140 |
| 13C12-OCDD | 63 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 67 | 24 - 185 |
| 13C12-23478-PeCDF | 61 | 21 - 178 |
| 13C12-123478-HxCDF | 61 | 26 - 152 |
| 13C12-123678-HxCDF | 66 | 26 - 123 |
| 13C12-234678-HxCDF | 64 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 79 | 28 - 143 |
| 13C12-1234789-HpCDF | 56 | 26 - 138 |
| 13C12-OCDF | 47 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465093**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7706 SDG#: PH177-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465093**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7706 SDG#: PH177-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 07:54 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/21/2014 21:25 | Laura M Krieger | 25.46 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201413534510 | 05/15/2014 19:45 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201413534510 | 05/15/2014 19:45 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 01:49 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 18:27 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 18:48 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/23/2014 03:45 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:11 | Katlin N Cataldi | 5 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:07 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:11 | Katlin N Cataldi | 5 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:07 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-841-SA5B-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465093**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7706 SDG#: PH177-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:11 | Katlin N Cataldi | 5 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:27 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:09 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:09 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:09 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:09 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:04 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-757-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7465094**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7707 SDG#: PH177-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.35 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 3.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 7.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 11 | J | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.8 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.5 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 12 | J | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 5.4 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | J | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 14 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.3 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.0 | | 1.7 | 0.68 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.1 | U | 5.1 | 2.1 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,200 | | 39.9 | 7.18 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.99 | U | 3.99 | 0.737 | 1 |
| 06935 | Arsenic | 7440-38-2 | 0.941 | J | 3.99 | 0.697 | 1 |
| 06946 | Barium | 7440-39-3 | 110 | | 0.996 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.542 | J | 0.996 | 0.0668 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-757-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7465094**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7707 SDG#: PH177-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 0.845 J | 9.96 | 0.837 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.996 U | 0.996 | 0.0757 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,880 | 19.9 | 3.33 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.1 | 2.99 | 0.159 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.11 | 0.996 | 0.0986 | 1 |
| 06953 | Copper | 7440-50-8 | 18.8 | 1.99 | 0.289 | 1 |
| 01654 | Iron | 7439-89-6 | 21,400 | 39.9 | 3.61 | 1 |
| 06955 | Lead | 7439-92-1 | 12.4 | 2.99 | 0.498 | 1 |
| 01656 | Lithium | 7439-93-2 | 17.3 | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,010 | 9.96 | 1.66 | 1 |
| 06958 | Manganese | 7439-96-5 | 333 | 0.996 | 0.0827 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.524 J | 1.99 | 0.169 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.5 | 1.99 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 399 | 9.96 | 2.88 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,090 | 99.6 | 8.31 | 1 |
| 01667 | Sodium | 7440-23-5 | 114 | 99.6 | 16.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.39 J | 9.96 | 0.219 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,230 | 0.996 | 0.169 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.7 | 0.996 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 125 | 3.99 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.41 J | 4.98 | 0.837 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.100 J | 0.399 | 0.0996 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0508 J | 0.199 | 0.0259 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.3 | 0.399 | 0.0678 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.254 | 0.199 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0292 | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.74 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.6 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-757-SA5C-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7465094**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7707 SDG#: PH177-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.108 | JQ | 1.01 | 0.0712 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.716 | J | 5.05 | 0.0674 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.24 | J | 5.05 | 0.0900 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.76 | J | 5.05 | 0.0945 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.26 | J | 5.05 | 0.0940 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 133 | B | 5.05 | 0.130 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,650 | B | 10.1 | 0.105 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.01 | U | 1.01 | 0.0602 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.315 | JB | 5.05 | 0.0463 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.397 | J | 5.05 | 0.0426 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.768 | J | 5.05 | 0.0882 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.635 | J | 5.05 | 0.0891 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.376 | J | 5.05 | 0.0816 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.867 | J | 5.05 | 0.0858 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 18.9 | B | 5.05 | 0.0757 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.21 | J | 5.05 | 0.0882 | 1 |
| 11031 | OCDF | 39001-02-0 | 54.3 | B | 10.1 | 0.0696 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 3.88 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 87 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 77 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 73 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 91 | 29 - 147 |
| 13C12-1234678-HpCDF | 80 | 28 - 143 |
| 13C12-1234789-HpCDF | 79 | 26 - 138 |
| 13C12-OCDF | 70 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465094**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7707 SDG#: PH177-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465094**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7707 SDG#: PH177-07

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 13:48 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 17:15 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 02:07 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/23/2014 04:42 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:15 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:31 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:12 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:12 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:12 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:12 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465094**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:35 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7707 SDG#: PH177-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:06 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-757-SA5C-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7465095**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:50 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7708 SDG#: PH177-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.54 | J | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.2 | | 1.8 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 3.0 | | 1.8 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 6.0 | | 1.8 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 5.2 | J | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.0 | | 1.8 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.2 | | 1.8 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 4.6 | | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.81 | J | 1.8 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.8 | | 1.8 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.3 | J | 1.8 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | | 1.8 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.7 | | 1.8 | 0.74 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.5 | U | 5.5 | 2.3 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 11 | J | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,100 | | 42.9 | 7.73 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.29 | U | 4.29 | 0.794 | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.24 | J | 4.29 | 0.751 | 1 |
| 06946 | Barium | 7440-39-3 | 120 | | 1.07 | 0.0354 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.552 | J | 1.07 | 0.0719 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465095**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:50 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7708 SDG#: PH177-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 10.7 | U | 10.7 | 0.901 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.07 | U | 1.07 | 0.0815 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,860 | | 21.5 | 3.58 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.0 | | 3.22 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.74 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 16.5 | | 2.15 | 0.311 | 1 |
| 01654 | Iron | 7439-89-6 | 21,400 | | 42.9 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 9.62 | | 3.22 | 0.536 | 1 |
| 01656 | Lithium | 7439-93-2 | 17.5 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,160 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 315 | | 1.07 | 0.0890 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.686 | J | 2.15 | 0.182 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.0 | | 2.15 | 0.139 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 489 | | 10.7 | 3.10 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,010 | | 107 | 8.95 | 1 |
| 01667 | Sodium | 7440-23-5 | 130 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.68 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,230 | | 1.07 | 0.182 | 1 |
| 06971 | Vanadium | 7440-62-2 | 43.8 | | 1.07 | 0.139 | 1 |
| 06972 | Zinc | 7440-66-6 | 112 | | 4.29 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.94 | J | 5.36 | 0.901 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.429 | U | 0.429 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0618 | J | 0.215 | 0.0279 | 2 |
| 06144 | Strontium | 7440-24-6 | 32.6 | | 0.429 | 0.0729 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.273 | | 0.215 | 0.0322 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0575 | | 0.0181 | 0.0108 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.68 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465095**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:50 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7708 SDG#: PH177-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.09 | U | 1.09 | 0.0699 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.364 | JQ | 5.46 | 0.0614 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.485 | J | 5.46 | 0.104 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 2.19 | J | 5.46 | 0.107 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.25 | J | 5.46 | 0.0979 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 68.0 | B | 5.46 | 0.109 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,000 | B | 10.9 | 0.131 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0666 | J | 1.09 | 0.0510 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.176 | JBQ | 5.46 | 0.0410 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0922 | JQ | 5.46 | 0.0370 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.430 | J | 5.46 | 0.0751 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.321 | J | 5.46 | 0.0747 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.122 | J | 5.46 | 0.0762 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.516 | JQ | 5.46 | 0.0735 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 11.4 | B | 5.46 | 0.0558 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.694 | JQ | 5.46 | 0.0674 | 1 |
| 11031 | OCDF | 39001-02-0 | 33.4 | B | 10.9 | 0.0733 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.59 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 75 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 81 | 28 - 143 |
| 13C12-1234789-HpCDF | 72 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465095**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:50 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7708 SDG#: PH177-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465095**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:50 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7708 SDG#: PH177-08

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/23/2014 12:39 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 17:28 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 02:25 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/23/2014 05:38 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:19 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:35 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:14 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:14 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:14 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:14 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465095**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 11:50 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7708 SDG#: PH177-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:08 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465096**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 12:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7709 SDG#: PH177-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 8.2 | J | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,800 | | 41.0 | 7.39 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.759 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.61 | J | 4.10 | 0.718 | 1 |
| 06946 | Barium | 7440-39-3 | 84.0 | | 1.03 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.415 | J | 1.03 | 0.0687 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-757-SA5C-SB-8.0-9.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7465096**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 12:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7709 SDG#: PH177-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 07914 | Boron | 7440-42-8 | 10.3 | U | 10.3 | 0.861 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0779 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,350 | | 20.5 | 3.42 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.6 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.50 | | 1.03 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 11.7 | | 2.05 | 0.297 | 1 |
| 01654 | Iron | 7439-89-6 | 16,100 | | 41.0 | 3.71 | 1 |
| 06955 | Lead | 7439-92-1 | 6.28 | | 3.08 | 0.513 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.4 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,460 | | 10.3 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 681 | | 1.03 | 0.0851 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.05 | U | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.3 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 269 | | 10.3 | 2.96 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,340 | | 103 | 8.55 | 1 |
| 01667 | Sodium | 7440-23-5 | 89.9 | J | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.93 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 955 | | 1.03 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 28.8 | | 1.03 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 40.9 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.14 | J | 5.13 | 0.861 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.410 | U | 0.410 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0594 | J | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.0 | | 0.410 | 0.0697 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.236 | | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0173 | U | 0.0173 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 9.07 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465096**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 12:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7709 SDG#: PH177-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.05 | U | 1.05 | 0.0561 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.27 | U | 5.27 | 0.0374 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0420 | JQ | 5.27 | 0.0223 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0248 | JQ | 5.27 | 0.0218 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.27 | U | 5.27 | 0.0230 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.426 | JB | 5.27 | 0.0371 | 1 |
| 11031 | OCDD | 3268-87-9 | 10.1 | JB | 10.5 | 0.0367 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.05 | U | 1.05 | 0.0333 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0502 | JBQ | 5.27 | 0.0201 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.27 | U | 5.27 | 0.0208 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0237 | J | 5.27 | 0.0202 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0175 | JQ | 5.27 | 0.0174 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.27 | U | 5.27 | 0.0202 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0223 | JQ | 5.27 | 0.0192 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0999 | JBQ | 5.27 | 0.0132 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.27 | U | 5.27 | 0.0228 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.287 | JB | 10.5 | 0.0534 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00975 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 62 | 21 - 178 |
| 13C12-123478-HxCDF | 64 | 26 - 152 |
| 13C12-123678-HxCDF | 71 | 26 - 123 |
| 13C12-234678-HxCDF | 65 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 89 | 28 - 143 |
| 13C12-1234789-HpCDF | 57 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465096**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 12:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7709 SDG#: PH177-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465096**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 12:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7709 SDG#: PH177-09

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 08:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 17:41 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 02:44 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141360001A | 05/16/2014 08:10 | Maria Davenport | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/23/2014 06:35 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:23 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:39 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:16 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:16 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:16 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:16 | Choon Y Tian | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-757-SA5C-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7465096**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 12:00 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7709 SDG#: PH177-09

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:10 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465097**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:55 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7710 SDG#: PH177-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.66 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.4 | J | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.85 | J | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.9 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 9.8 | J | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-842-SA5B-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7465097**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:55 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7710 SDG#: PH177-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.3 | J | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,100 | | 40.8 | 7.36 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.08 | U | 4.08 | 0.755 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.58 | | 4.08 | 0.715 | 1 |
| 06946 | Barium | 7440-39-3 | 91.4 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.649 | J | 1.02 | 0.0684 | 1 |
| 07914 | Boron | 7440-42-8 | 1.03 | J | 10.2 | 0.857 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.02 | U | 1.02 | 0.0776 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,170 | | 20.4 | 3.41 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.2 | | 3.06 | 0.163 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.31 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 12.9 | | 2.04 | 0.296 | 1 |
| 01654 | Iron | 7439-89-6 | 19,700 | | 40.8 | 3.70 | 1 |
| 06955 | Lead | 7439-92-1 | 9.44 | | 3.06 | 0.510 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.1 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,700 | | 10.2 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 293 | | 1.02 | 0.0847 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.491 | J | 2.04 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.8 | | 2.04 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 441 | | 10.2 | 2.95 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,260 | | 102 | 8.51 | 1 |
| 01667 | Sodium | 7440-23-5 | 87.1 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.22 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,120 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.9 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.6 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.48 | J | 5.10 | 0.857 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.408 | U | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 2.54 | | 0.204 | 0.0265 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.8 | | 0.408 | 0.0694 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.263 | | 0.204 | 0.0306 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0128 | J | 0.0167 | 0.010 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.59 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465097**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:55 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7710 SDG#: PH177-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.0 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465097**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:55 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7710 SDG#: PH177-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.998 | U | 0.998 | 0.0556 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.657 | J | 4.99 | 0.0630 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.67 | J | 4.99 | 0.0867 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.04 | J | 4.99 | 0.0879 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 3.56 | J | 4.99 | 0.0902 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 115 | B | 4.99 | 0.134 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,330 | B | 9.98 | 0.0847 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0880 | JQ | 0.998 | 0.0669 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.169 | JBQ | 4.99 | 0.0475 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.167 | JQ | 4.99 | 0.0510 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.26 | J | 4.99 | 0.113 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 2.43 | J | 4.99 | 0.0948 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.253 | JQ | 4.99 | 0.120 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 2.18 | J | 4.99 | 0.104 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 35.7 | B | 4.99 | 0.0623 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.80 | J | 4.99 | 0.112 | 1 |
| 11031 | OCDF | 39001-02-0 | 89.9 | B | 9.98 | 0.0832 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 4.03 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 65 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 69 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 57 | 26 - 138 |
| 13C12-OCDF | 46 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465097**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:55 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7710 SDG#: PH177-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465097**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:55 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7710 SDG#: PH177-10

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 08:57 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 03:02 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 18:48 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 19:10 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/23/2014 07:32 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:27 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:43 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465097**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:55 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7710 SDG#: PH177-10

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:19 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:19 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:19 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:19 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:12 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465098**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 14:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7711 SDG#: PH177-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.65 | J | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.4 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.95 | J | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.87 | J | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.71 | J | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.81 | J | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.7 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465098**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 14:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7711 SDG#: PH177-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.6 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,500 | | 41.3 | 7.45 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.13 | U | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 35.4 | | 4.13 | 0.723 | 1 |
| 06946 | Barium | 7440-39-3 | 91.5 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.880 | J | 1.03 | 0.0692 | 1 |
| 07914 | Boron | 7440-42-8 | 10.3 | U | 10.3 | 0.868 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0785 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,280 | | 20.7 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 39.6 | | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.68 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 18.8 | | 2.07 | 0.300 | 1 |
| 01654 | Iron | 7439-89-6 | 27,700 | | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 14.1 | | 3.10 | 0.517 | 1 |
| 01656 | Lithium | 7439-93-2 | 43.9 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,700 | | 10.3 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 343 | | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.877 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 22.5 | | 2.07 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 450 | | 10.3 | 2.99 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,400 | | 103 | 8.62 | 1 |
| 01667 | Sodium | 7440-23-5 | 243 | | 103 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.77 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,400 | | 1.03 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 43.9 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 65.4 | | 4.13 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.63 | J | 5.17 | 0.868 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.413 | U | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 1.10 | | 0.207 | 0.0269 | 2 |
| 06144 | Strontium | 7440-24-6 | 38.1 | | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.291 | | 0.207 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0174 | | 0.0173 | 0.0104 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465098**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 14:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7711 SDG#: PH177-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 8.01 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.1 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG-SL-842-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7465098**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 14:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7711 SDG#: PH177-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.101 | JQ | 1.05 | 0.0775 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.888 | JQ | 5.24 | 0.0793 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 2.01 | J | 5.24 | 0.138 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.31 | J | 5.24 | 0.138 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 4.09 | J | 5.24 | 0.141 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 118 | B | 5.24 | 0.163 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,430 | B | 10.5 | 0.147 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.05 | U | 1.05 | 0.0802 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.165 | JBQ | 5.24 | 0.0614 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.170 | JQ | 5.24 | 0.0633 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.26 | J | 5.24 | 0.155 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 2.11 | J | 5.24 | 0.134 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.260 | JQ | 5.24 | 0.178 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 2.17 | J | 5.24 | 0.148 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 32.9 | B | 5.24 | 0.0762 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.60 | J | 5.24 | 0.140 | 1 |
| 11031 | OCDF | 39001-02-0 | 81.8 | B | 10.5 | 0.128 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 3.49 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 67 | 24 - 185 |
| 13C12-23478-PeCDF | 58 | 21 - 178 |
| 13C12-123478-HxCDF | 63 | 26 - 152 |
| 13C12-123678-HxCDF | 70 | 26 - 123 |
| 13C12-234678-HxCDF | 65 | 28 - 136 |
| 13C12-123789-HxCDF | 63 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 50 | 26 - 138 |
| 13C12-OCDF | 42 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465098**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 14:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7711 SDG#: PH177-11*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465098**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 14:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7711 SDG#: PH177-11*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14140SLA026 | 05/22/2014 09:30 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14140SLA026 | 05/20/2014 17:35 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/21/2014 22:03 | Laura M Krieger | 24.7 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201413534510 | 05/15/2014 19:47 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201413534510 | 05/15/2014 19:47 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141360028A | 05/21/2014 03:20 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141360028A | 05/19/2014 05:50 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 19:10 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 19:32 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14140004 | 05/23/2014 08:28 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14140004 | 05/20/2014 11:00 | Deborah M Zimmerman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:31 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141360637001 | 05/21/2014 20:31 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG-SL-842-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7465098**
**LL Group # 1474671**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 14:25 by WT

Submitted: 05/15/2014 10:00
Reported: 06/09/2014 12:57

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P7711 SDG#: PH177-11*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141360637001 | 05/21/2014 10:47 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141360637001B | 05/22/2014 05:21 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:21 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:21 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141360637001A | 05/22/2014 05:21 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141360638001 | 05/20/2014 10:14 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141360637001 | 05/20/2014 22:53 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141360638001 | 05/19/2014 12:17 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14135039401A | 05/15/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401A | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14140SLA026 | Sample number(s): 7465091-7465098 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 109 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 117 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 118 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 80-119 | | |
| Batch number: 14140WAB026 | Sample number(s): 7465088-7465089 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 108 | 83-119 | 1 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 102 | 81-130 | 1 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 103 | 83-125 | 0 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 97 | 100 | 79-122 | 3 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 98 | 80-121 | 6 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 108 | 79-136 | 6 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 100 | 67-118 | 4 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 73 | 83 | 72-132 | 12 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 85 | 92 | 81-131 | 8 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 98 | 97 | 40-138 | 0 | 30 |
| Di-n-butylphthalate | 0.18 | J | 1.0 | 0.050 | ug/l | 112 | 110 | 64-141 | 2 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 98 | 84-118 | 3 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 59* | 67 | 66-133 | 11 | 30 |
| Diethylphthalate | 0.10 | J | 1.0 | 0.050 | ug/l | 109 | 107 | 64-137 | 2 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 105 | 104 | 23-139 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 0.12 | J | 1.0 | 0.050 | ug/l | 52* | 46* | 70-143 | 12 | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 99 | 84-124 | 1 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 102 | 82-119 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 68 | 77 | 68-132 | 13 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 97 | 86-130 | 1 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 94 | 81-131 | 2 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 98 | 99 | 82-122 | 0 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 57 | 56 | 56-96 | 3 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 39* | 36* | 57-145 | 8 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 97 | 98 | 83-116 | 1 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 100 | 78-125 | 0 | 30 |
| Batch number: 14141A16A | Sample number(s): 7465092-7465093,7465098 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 80 | | 67-120 | | |
| Batch number: 14142A94A | Sample number(s): 7465089-7465090 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 109 | 111 | 80-133 | 2 | 30 |
| Batch number: 141360001A | Sample number(s): 7465094-7465096 | | | | | | | | | |
| 6a Perchlorate (Method 6850) | 5.0 | U | 5.0 | 2.1 | ug/kg | 105 | | 85-115 | | |
| Batch number: 141390018A | Sample number(s): 7465088-7465089 | | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 | U | 1.0 | 0.20 | ug/l | 97 | | 85-115 | | |
| Batch number: 141360028A | Sample number(s): 7465091-7465098 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 80 | 85 | 36-106 | 5 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 95 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 100 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141400007A | Sample number(s): 7465088-7465089 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 72 | 72 | 34-115 | 0 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 87 | 84 | 60-117 | 3 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 92 | 90 | 67-128 | 2 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141390014A | Sample number(s): 7465088-7465089 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 78 | 75 | 67-109 | 4 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 84 | 83 | 71-119 | 1 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 84 | 83 | 75-117 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 58 | 63 | 44-134 | 8 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 60 | 56 | 55-86 | 7 | 30 |
| Batch number: 141390015A | Sample number(s): 7465088-7465089 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 69 | 65* | 67-109 | 7 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 75 | 72 | 71-119 | 4 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 74* | 72* | 75-117 | 3 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 57 | 58 | 44-134 | 1 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 49* | 44* | 55-86 | 12 | 30 |
| Batch number: 141410016A | Sample number(s): 7465091-7465093,7465097-7465098 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 117* | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 120 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 119 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 66 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 60-115 | | |
| Batch number: 141410017A | Sample number(s): 7465091-7465093,7465097-7465098 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 71* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 74* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 73* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 53 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 57* | | 60-115 | | |
| Batch number: 141360637001 | Sample number(s): 7465091-7465098 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 100 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 108 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 98 | | 80-120 | | |
| Boron | 2.41 | J | 10.0 | 0.840 | mg/kg | 98 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 103 | | 80-120 | | |
| Calcium | 15.4 | J | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 102 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 104 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 103 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 103 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 102 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 100 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 99 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 100 | | 80-120 | | |
| Tin | 1.42 | J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 102 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 102 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141360637001A | Sample number(s): 7465091-7465098 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 107 | | 80-120 | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Strontium | 0.105 | J | 0.400 | 0.0680 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 96 | | 80-120 | | |
| Batch number: 141360637001B | Sample number(s): 7465091-7465098 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141360638001 | Sample number(s): 7465091-7465098 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 91 | | 85-120 | | |
| Batch number: 141390635001 | Sample number(s): 7465088-7465089 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 104 | 104 | 90-112 | 0 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 99 | 100 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 105 | 109 | 90-113 | 3 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 102 | 105 | 90-110 | 3 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 99 | 103 | 90-111 | 4 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 94 | 97 | 90-110 | 3 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 105 | 107 | 90-112 | 2 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 103 | 104 | 90-112 | 0 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 100 | 104 | 90-110 | 4 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 108 | 110 | 90-110 | 2 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 100 | 104 | 90-112 | 4 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 104 | 103 | 90-112 | 1 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 107 | 110 | 88-116 | 3 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 104 | 105 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 103 | 103 | 89-110 | 0 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 102 | 106 | 90-110 | 4 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 107 | 108 | 90-110 | 1 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0015 | mg/l | 108 | 111 | 90-111 | 2 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0418 | mg/l | 101 | 104 | 90-110 | 3 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.0980 | mg/l | 102 | 103 | 90-110 | 1 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 102 | 103 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 104 | 105 | 90-110 | 1 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 105 | 107 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0020 | mg/l | 104 | 108 | 90-110 | 3 | 20 |
| Zinc | 0.0400 | U | 0.0400 | 0.0020 | mg/l | 103 | 106 | 90-110 | 3 | 20 |
| Zirconium | 0.100 | U | 0.100 | 0.0084 | mg/l | 108 | 106 | 90-110 | 1 | 20 |
| Batch number: 141390639001A | Sample number(s): 7465088-7465089 | | | | | | | | | |
| Silver | 0.0010 | U | 0.0010 | 0.00011 | mg/l | 104 | 105 | 90-115 | 1 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00034 | mg/l | 101 | 101 | 90-110 | 0 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 102 | 99 | 90-115 | 3 | 20 |
| Batch number: 141390639001B | Sample number(s): 7465088-7465089 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 110 | 106 | 90-114 | 4 | 20 |
| Batch number: 141415713001 | Sample number(s): 7465088-7465089 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006<br>0 | mg/l | 103 | 98 | 90-115 | 5 | 20 |
| Batch number: 14135039401A | Sample number(s): 7465091-7465098 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14136002101A | Sample number(s): 7465088-7465089 | | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 100 | | 90-110 | | |
| Batch number: 14141162401A | Sample number(s): 7465091-7465098 | | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14136003 | Sample number(s): 7465088-7465089 | | | | | | | | | |
| 2378-TCDD | 0.258 | J | 2.00 | 0.252 | pg/l | 89 | | 60-150 | | |
| 12378-PeCDD | 0.307 | J | 10.0 | 0.220 | pg/l | 89 | | 60-150 | | |
| 123478-HxCDD | 0.303 | J | 10.0 | 0.162 | pg/l | 89 | | 60-150 | | |
| 123678-HxCDD | 0.312 | J | 10.0 | 0.172 | pg/l | 89 | | 60-150 | | |
| 123789-HxCDD | 0.356 | J | 10.0 | 0.171 | pg/l | 91 | | 60-150 | | |
| 1234678-HpCDD | 1.08 | J | 10.0 | 0.186 | pg/l | 90 | | 60-150 | | |
| OCDD | 5.19 | J | 20.0 | 0.271 | pg/l | 85 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.174 | pg/l | 85 | | 60-150 | | |
| 12378-PeCDF | 0.466 | J | 10.0 | 0.120 | pg/l | 88 | | 60-150 | | |
| 23478-PeCDF | 0.402 | J | 10.0 | 0.110 | pg/l | 90 | | 60-150 | | |
| 123478-HxCDF | 0.418 | J | 10.0 | 0.110 | pg/l | 91 | | 60-150 | | |
| 123678-HxCDF | 0.243 | J | 10.0 | 0.108 | pg/l | 91 | | 60-150 | | |
| 123789-HxCDF | 0.445 | J | 10.0 | 0.108 | pg/l | 89 | | 60-150 | | |
| 234678-HxCDF | 0.153 | J | 10.0 | 0.101 | pg/l | 90 | | 60-150 | | |
| 1234678-HpCDF | 0.515 | J | 10.0 | 0.0885 | pg/l | 90 | | 60-150 | | |
| 1234789-HpCDF | 0.574 | J | 10.0 | 0.0907 | pg/l | 89 | | 60-150 | | |
| OCDF | 1.10 | J | 20.0 | 0.202 | pg/l | 86 | | 60-150 | | |
| Batch number: 14140004 | Sample number(s): 7465091-7465098 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0925 | ng/kg | 89 | | 67-158 | | |
| 12378-PeCDD | 5.00 | U | 5.00 | 0.0577 | ng/kg | 91 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0350 | ng/kg | 93 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0353 | ng/kg | 89 | | 76-134 | | |
| 123789-HxCDD | 5.00 | U | 5.00 | 0.0369 | ng/kg | 91 | | 64-162 | | |
| 1234678-HpCDD | 0.0895 | J | 5.00 | 0.0465 | ng/kg | 88 | | 70-140 | | |
| OCDD | 0.182 | J | 10.0 | 0.0350 | ng/kg | 92 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0676 | ng/kg | 98 | | 75-158 | | |
| 12378-PeCDF | 0.0521 | J | 5.00 | 0.0360 | ng/kg | 95 | | 80-134 | | |
| 23478-PeCDF | 5.00 | U | 5.00 | 0.0364 | ng/kg | 95 | | 68-160 | | |
| 123478-HxCDF | 5.00 | U | 5.00 | 0.0352 | ng/kg | 94 | | 72-134 | | |
| 123678-HxCDF | 5.00 | U | 5.00 | 0.0304 | ng/kg | 94 | | 84-130 | | |
| 123789-HxCDF | 5.00 | U | 5.00 | 0.0336 | ng/kg | 90 | | 78-130 | | |
| 234678-HxCDF | 5.00 | U | 5.00 | 0.0312 | ng/kg | 95 | | 70-156 | | |
| 1234678-HpCDF | 0.0247 | J | 5.00 | 0.0138 | ng/kg | 89 | | 82-122 | | |
| 1234789-HpCDF | 5.00 | U | 5.00 | 0.0244 | ng/kg | 91 | | 78-138 | | |
| OCDF | 0.137 | J | 10.0 | 0.0872 | ng/kg | 91 | | 63-170 | | |
| Batch number: 14136003 | Sample number(s): 7465088-7465089 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0940 | | | | pg/l | | | | | |
| Batch number: 14140004 | Sample number(s): 7465091-7465098 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0000550 | | | | ng/kg | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14140SLA026 | Sample number(s): 7465091-7465098 UNSPK: P461254 | | | | | | | | |
| Acenaphthene | 98 | 92 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 103 | 95 | 60-128 | 8 | 30 | | | | |
| Anthracene | 97 | 93 | 52-126 | 4 | 30 | | | | |
| Benzo(a)anthracene | 98 | 100 | 44-143 | 2 | 30 | | | | |
| Benzo(a)pyrene | 84 | 82 | 49-137 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 96 | 96 | 26-142 | 0 | 30 | | | | |
| Benzo(e)pyrene | 78 | 73 | 63-111 | 6 | 30 | | | | |
| Benzo(g,h,i)perylene | 48 | 42 | 33-141 | 12 | 30 | | | | |
| Benzo(k)fluoranthene | 91 | 85 | 49-144 | 6 | 30 | | | | |
| Butylbenzylphthalate | 112 | 108 | 64-156 | 4 | 30 | | | | |
| Di-n-butylphthalate | 114 | 107 | 52-147 | 7 | 30 | | | | |
| Chrysene | 91 | 89 | 43-141 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 66 | 58 | 25-145 | 13 | 30 | | | | |
| Diethylphthalate | 102 | 92 | 66-140 | 10 | 30 | | | | |
| Dimethylphthalate | 100 | 91 | 70-123 | 10 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 99 | 94 | 48-164 | 4 | 30 | | | | |
| Fluoranthene | 93 | 93 | 38-153 | 0 | 30 | | | | |
| Fluorene | 94 | 89 | 57-130 | 6 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 69 | 52 | 26-139 | 26 | 30 | | | | |
| 1-Methylnaphthalene | 94 | 85 | 59-139 | 9 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 89 | 46-147 | 7 | 30 | | | | |
| Naphthalene | 94 | 88 | 52-136 | 6 | 30 | | | | |
| N-Nitrosodimethylamine | 85 | 82 | 39-134 | 4 | 30 | | | | |
| Di-n-octylphthalate | 134 | 128 | 52-162 | 5 | 30 | | | | |
| Phenanthrene | 102 | 95 | 50-137 | 6 | 30 | | | | |
| Pyrene | 86 | 91 | 26-143 | 4 | 30 | | | | |
| Batch number: 14141A16A | Sample number(s): 7465092-7465093,7465098 UNSPK: P470316 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 80 | 87 | 69-123 | 15 | 30 | | | | |
| Batch number: 141360001A | Sample number(s): 7465094-7465096 UNSPK: P457971 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 108 | 111 | 80-120 | 3 | 20 | | | | |
| Batch number: 141390018A | Sample number(s): 7465088-7465089 UNSPK: P462597 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 98 | 100 | 80-120 | 2 | 20 | | | | |
| Batch number: 141360028A | Sample number(s): 7465091-7465098 UNSPK: P461254 | | | | | | | | |
| PCB-1016 | 91 | 92 | 41-135 | 3 | 50 | | | | |
| PCB-1260 | 107 | 110 | 40-134 | 3 | 50 | | | | |
| Batch number: 141410016A | Sample number(s): 7465091-7465093,7465097-7465098 UNSPK: P470316 | | | | | | | | |
| EFH (C12-C14) | 108 | 96 | 49-123 | 12 | 20 | | | | |
| EFH (C15-C20) | 112 | 99 | 49-123 | 12 | 20 | | | | |
| EFH (C21-C30) | 115 | 98 | 49-123 | 16 | 20 | | | | |
| EFH (C30-C40) | 114 | 75 | 49-123 | 42* | 20 | | | | |
| EFH (C8-C11) | 90 | 88 | 49-123 | 2 | 20 | | | | |
| Batch number: 141410017A | Sample number(s): 7465091-7465093,7465097-7465098 UNSPK: P470316 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 72 | 70 | 49-123 | 3 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 74 | 71 | 49-123 | 4 | 20 | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| EFH C21-C30 w/ SiGel | 73 | 71 | 49-123 | 3 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 62 | 58 | 49-123 | 7 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 60 | 64 | 49-123 | 5 | 20 | | | | |
| Batch number: 141360637001 | Sample number(s): 7465091-7465098 UNSPK: P466734 BKG: P466734 | | | | | | | | |
| Aluminum | 3551 (2) | 3346 (2) | 75-125 | 2 | 20 | 12,800 | 12,700 | 1 | 20 |
| Antimony | 75 | 76 | 75-125 | 1 | 20 | 3.96 U | 3.96 U | 0 (1) | 20 |
| Arsenic | 110 | 100 | 75-125 | 7 | 20 | 3.41 J | 3.62 J | 6 (1) | 20 |
| Barium | 101 | 98 | 75-125 | 2 | 20 | 63.0 | 61.6 | 2 | 20 |
| Beryllium | 103 | 101 | 75-125 | 1 | 20 | 0.576 J | 0.591 J | 3 (1) | 20 |
| Boron | 97 | 96 | 75-125 | 2 | 20 | 9.90 U | 0.899 J | 200* (1) | 20 |
| Cadmium | 89 | 90 | 75-125 | 0 | 20 | 0.990 U | 0.990 U | 0 (1) | 20 |
| Calcium | 258 (2) | 93 (2) | 75-125 | 11 | 20 | 5,020 | 4,630 | 8 | 20 |
| Chromium | 110 | 111 | 75-125 | 0 | 20 | 15.0 | 14.8 | 1 (1) | 20 |
| Cobalt | 96 | 96 | 75-125 | 0 | 20 | 6.40 | 6.62 | 3 | 20 |
| Copper | 117 | 107 | 75-125 | 6 | 20 | 12.9 | 12.0 | 7 | 20 |
| Iron | 1787 (2) | 324 (2) | 75-125 | 6 | 20 | 22,400 | 22,300 | 0 | 20 |
| Lead | 91 | 86 | 75-125 | 3 | 20 | 11.5 | 11.2 | 3 (1) | 20 |
| Lithium | 103 | 102 | 75-125 | 1 | 20 | 13.2 | 12.5 | 6 (1) | 20 |
| Magnesium | 495 (2) | 473 (2) | 75-125 | 1 | 20 | 4,140 | 4,030 | 3 | 20 |
| Manganese | 129 (2) | 144 (2) | 75-125 | 3 | 20 | 223 | 219 | 2 | 20 |
| Molybdenum | 95 | 94 | 75-125 | 0 | 20 | 1.27 J | 0.750 J | 51* (1) | 20 |
| Nickel | 96 | 96 | 75-125 | 1 | 20 | 7.42 | 7.46 | 0 (1) | 20 |
| Phosphorus | 45 (2) | 58 (2) | 75-125 | 3 | 20 | 421 | 331 | 24* | 20 |
| Potassium | 133* | 128* | 75-125 | 1 | 20 | 2,130 | 2,110 | 1 | 20 |
| Sodium | 99 | 99 | 75-125 | 0 | 20 | 218 | 206 | 6 (1) | 20 |
| Tin | 89 | 89 | 75-125 | 0 | 20 | 2.79 J | 2.75 J | 1 (1) | 20 |
| Titanium | 336 (2) | 350 (2) | 75-125 | 1 | 20 | 810 | 798 | 1 | 20 |
| Vanadium | 113 | 108 | 75-125 | 3 | 20 | 37.7 | 35.4 | 6 | 20 |
| Zinc | 105 | 100 | 75-125 | 3 | 20 | 48.7 | 47.4 | 3 | 20 |
| Zirconium | 100 | 99 | 75-125 | 0 | 20 | 3.33 J | 3.61 J | 8 (1) | 20 |
| Batch number: 141360637001A | Sample number(s): 7465091-7465098 UNSPK: P466734 BKG: P466734 | | | | | | | | |
| Silver | 113 | 109 | 75-125 | 3 | 20 | 0.0305 J | 0.0307 J | 1 (1) | 20 |
| Strontium | 150* | 164* | 75-125 | 3 | 20 | 26.5 | 25.6 | 4 | 20 |
| Thallium | 133* | 117 | 75-125 | 9 | 20 | 0.209 | 0.226 | 8 (1) | 20 |
| Batch number: 141360637001B | Sample number(s): 7465091-7465098 UNSPK: P466734 BKG: P466734 | | | | | | | | |
| Selenium | 96 | 105 | 75-125 | 8 | 20 | 0.117 J | 0.396 U | 200* (1) | 20 |
| Batch number: 141360638001 | Sample number(s): 7465091-7465098 UNSPK: P466734 BKG: P466734 | | | | | | | | |
| 3a Mercury 7471A | 143* | 97 | 65-135 | 25* | 20 | 0.101 | 0.134 | 27* | 20 |
| Batch number: 14135039401A | Sample number(s): 7465091-7465098 BKG: 7465098 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.01 | 7.98 | 0 | 3 |
| Batch number: 14136002101A | Sample number(s): 7465088-7465089 BKG: P461879 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 6.7 | 6.8 | 2 | 3 |
| Batch number: 14141162401A | Sample number(s): 7465091-7465098 BKG: 7465096 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | | 6.2 | 6.3 | 2 | 20 |
| Batch number: 14140004 | Sample number(s): 7465091-7465098 UNSPK: P464578 | | | | | | | | |
| 2378-TCDD | 88 | 89 | 40-135 | 0 | 20 | | | | |
| 12378-PeCDD | 91 | 89 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDD | 95 | 95 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDD | 93 | 92 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 94 | 91 | 40-135 | 4 | 20 | | | | |
| 1234678-HpCDD | 174* | 150* | 40-135 | 13 | 20 | | | | |
| OCDD | 711* | 460* | 40-135 | 33* | 20 | | | | |
| 2378-TCDF | 93 | 90 | 40-135 | 4 | 20 | | | | |
| 12378-PeCDF | 93 | 92 | 40-135 | 2 | 20 | | | | |
| 23478-PeCDF | 94 | 93 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 95 | 93 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDF | 92 | 92 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDF | 90 | 92 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 95 | 96 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 99 | 98 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 90 | 92 | 40-135 | 2 | 20 | | | | |
| OCDF | 103 | 97 | 40-135 | 7 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14140SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7465091 | 89 | 103 | 82 |
| 7465092 | 85 | 97 | 81 |
| 7465093 | 89 | 100 | 82 |
| 7465094 | 86 | 107 | 81 |
| 7465095 | 91 | 104 | 82 |
| 7465096 | 90 | 108 | 86 |
| 7465097 | 86 | 99 | 82 |
| 7465098 | 81 | 99 | 80 |
| Blank | 91 | 104 | 83 |
| LCS | 93 | 109 | 85 |
| MS | 87 | 98 | 84 |
| MSD | 85 | 90 | 79 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14140WAB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene- |
|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

## Surrogate Quality Control

| | | | d10 |
|---|---|---|---|
| 7465088 | 98 | 91 | 84 |
| 7465089 | 112 | 128 | 101 |
| Blank | 109 | 129 | 97 |
| LCS | 105 | 112 | 97 |
| LCSD | 106 | 119 | 98 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14141A16A

| | Trifluorotoluene-F |
|---|---|
| 7465092 | 82 |
| 7465093 | 78 |
| 7465098 | 86 |
| Blank | 99 |
| LCS | 100 |
| MS | 87 |
| MSD | 95 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14142A94A

| | Trifluorotoluene-F |
|---|---|
| 7465089 | 88 |
| 7465090 | 85 |
| Blank | 86 |
| LCS | 97 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141360028A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7465091 | 104 | 110 |
| 7465092 | 101 | 110 |
| 7465093 | 99 | 104 |
| 7465094 | 66 | 62 |
| 7465095 | 87 | 85 |
| 7465096 | 106 | 107 |
| 7465097 | 100 | 108 |
| 7465098 | 101 | 103 |
| Blank | 102 | 107 |
| LCS | 107 | 106 |
| LCSD | 103 | 108 |
| MS | 98 | 104 |
| MSD | 99 | 107 |
| Limits: | 45-120 | 45-120 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

## Surrogate Quality Control

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141400007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7465088 | 89 | 58 |
| 7465089 | 86 | 54 |
| Blank | 98 | 98 |
| LCS | 100 | 79 |
| LCSD | 96 | 77 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141390014A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7465088 | 85 | 84 |
| 7465089 | 75 | 86 |
| Blank | 66 | 80 |
| LCS | 86 | 80 |
| LCSD | 65 | 78 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141390015A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7465088 | 73 | 76 |
| 7465089 | 68 | 71 |
| Blank | 64 | 71 |
| LCS | 67 | 72 |
| LCSD | 62 | 68* |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141410016A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7465091 | 80 | 87 |
| 7465092 | 94 | 106 |
| 7465093 | 88 | 101 |
| 7465097 | 88 | 102 |
| 7465098 | 91 | 105 |
| Blank | 94 | 106 |
| LCS | 96 | 116 |
| MS | 94 | 106 |
| MSD | 86 | 94 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141410017A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7465091 | 68 | 73 |
| 7465092 | 63 | 71 |
| 7465093 | 70 | 80 |
| 7465097 | 70 | 76 |
| 7465098 | 58 | 64* |
| Blank | 76 | 83 |
| LCS | 62 | 72 |
| MS | 65 | 72 |
| MSD | 66 | 72 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14136003

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7465088 | 80 | 85 | 88 | 88 | 87 | 91 |
| 7465089 | 80 | 84 | 84 | 86 | 85 | 86 |
| Blank | 86 | 89 | 92 | 94 | 92 | 103 |
| OPR | 83 | 91 | 94 | 92 | 92 | 96 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7465088 | 84 | 89 | 92 | 93 | 93 | 94 |
| 7465089 | 83 | 84 | 97 | 90 | 89 | 91 |
| Blank | 91 | 90 | 96 | 94 | 97 | 98 |
| OPR | 100 | 85 | 95 | 96 | 93 | 93 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7465088 | 94 | 97 | 93 | 95 | 90 |
| 7465089 | 91 | 107 | 92 | 89 | 85 |
| Blank | 98 | 101 | 100 | 106 | 96 |
| OPR | 95 | 107 | 98 | 100 | 100 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14140004

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7465091 | 74 | 71 | 76 | 76 | 78 | 77 |
| 7465092 | 72 | 75 | 77 | 76 | 76 | 79 |
| 7465093 | 72 | 73 | 74 | 73 | 75 | 75 |
| 7465094 | 84 | 83 | 87 | 86 | 88 | 91 |
| 7465095 | 83 | 84 | 89 | 85 | 88 | 88 |
| 7465096 | 72 | 74 | 79 | 79 | 78 | 80 |
| 7465097 | 80 | 77 | 85 | 84 | 84 | 82 |
| 7465098 | 73 | 70 | 77 | 76 | 77 | 73 |
| Blank | 70 | 74 | 81 | 81 | 80 | 78 |
| MS | 84 | 87 | 88 | 84 | 87 | 89 |
| MSD | 82 | 90 | 85 | 82 | 86 | 88 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474671
Reported: 06/09/14 at 12:57 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| OPR | 68 | 73 | 77 | 76 | 77 | 77 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |
| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
| 7465091 | 69 | 66 | 69 | 63 | 63 | 68 |
| 7465092 | 69 | 64 | 70 | 63 | 65 | 70 |
| 7465093 | 63 | 63 | 67 | 61 | 61 | 66 |
| 7465094 | 85 | 77 | 76 | 73 | 75 | 74 |
| 7465095 | 80 | 78 | 75 | 75 | 78 | 77 |
| 7465096 | 67 | 64 | 69 | 62 | 64 | 71 |
| 7465097 | 76 | 69 | 75 | 64 | 65 | 74 |
| 7465098 | 68 | 63 | 67 | 58 | 63 | 70 |
| Blank | 67 | 60 | 68 | 62 | 63 | 71 |
| MS | 83 | 77 | 81 | 77 | 74 | 76 |
| MSD | 84 | 73 | 77 | 75 | 74 | 72 |
| OPR | 68 | 59 | 68 | 62 | 63 | 68 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7465091 | 66 | 72 | 80 | 59 | 51 | |
| 7465092 | 66 | 68 | 86 | 57 | 48 | |
| 7465093 | 64 | 80 | 79 | 56 | 47 | |
| 7465094 | 76 | 91 | 80 | 79 | 70 | |
| 7465095 | 78 | 80 | 81 | 72 | 61 | |
| 7465096 | 65 | 71 | 89 | 57 | 43 | |
| 7465097 | 68 | 69 | 93 | 57 | 46 | |
| 7465098 | 65 | 63 | 85 | 50 | 42 | |
| Blank | 68 | 74 | 89 | 55 | 45 | |
| MS | 77 | 100 | 83 | 78 | 67 | |
| MSD | 73 | 91 | 77 | 76 | 69 | |
| OPR | 65 | 71 | 86 | 56 | 47 | |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

acct#13013 Cap#1474671 Sample#7465088-101

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/14/2014
CarrierName: FedEx
AirbillNo: 798863489721

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140514-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-051414 | 5/14/14 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | For all EFH, silica gel |
| EB1-051414 | 5/14/14 15:00 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | | cleanup required on 1/2 |
| EB1-051414 | 5/14/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | the extract. Analyze both |
| EB1-051414 | 5/14/14 15:00 | WQ | None | 1 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | extracts for EFH. |
| EB1-051414 | 5/14/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB1-051414 | 5/14/14 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB2-051414 | 5/14/14 15:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-051414 | 5/14/14 15:30 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-051414 | 5/14/14 15:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-051414 | 5/14/14 15:30 | WQ | None | 1 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| EB2-051414 | 5/14/14 15:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| EB2-051414 | 5/14/14 15:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB2-051414 | 5/14/14 15:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Pat Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Shay Mypel | 05/14/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/15/14 | 1000 |

Final Data Gap

acct# 13013 Gp# 1474671 Sample# 7465088-101

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/14/2014
CarrierName: FedEx
AirbillNo: 798863489927

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140514-02
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB1-051414 | 5/14/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG-SL-841-SA5B-SB-0.0-0.5 | 5/14/14 09:00 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | For all EFH, silica gel |
| FDG-SL-841-SA5B-SB-0.0-0.5 | 5/14/14 09:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | cleanup required on 1/2 |
| FDG-SL-841-SA5B-SB-4.0-5.0 | 5/14/14 09:25 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | the extract. Analyze both |
| FDG-SL-841-SA5B-SB-4.0-5.0 | 5/14/14 09:25 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | extracts for EFH. |
| FDG-SL-841-SA5B-SB-9.0-10.0 | 5/14/14 09:35 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| FDG-SL-841-SA5B-SB-9.0-10.0 | 5/14/14 09:35 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG-SL-757-SA5C-SB-0.0-0.5 | 5/14/14 11:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-757-SA5C-SB-0.0-0.5 | 5/14/14 11:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-757-SA5C-SB-4.0-5.0 | 5/14/14 11:50 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | X | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-757-SA5C-SB-8.0-9.0 | 5/14/14 12:00 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | X | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-842-SA5B-SB-0.0-0.5 | 5/14/14 13:55 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| FDG-SL-842-SA5B-SB-0.0-0.5 | 5/14/14 13:55 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| FDG-SL-842-SA5B-SB-4.0-5.0 | 5/14/14 14:25 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| FDG-SL-842-SA5B-SB-4.0-5.0 | 5/14/14 14:25 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Whitney Treadway

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stephanie Lopez | 05/14/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/15/14 | 1000 |

Final Data Gap

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14574

Group Number(s): 1474671

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/15/2014 10:00 |
| Number of Packages: | 2 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 12:12 on 05/15/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 4.1 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 29, 2014

Project: SSFL Phase 3 Sampling

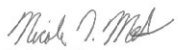
Submittal Date: 05/16/2014
Group Number: 1474888
SDG: PH178
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB-051514 Water | 7466271 |
| SVL-534-SA5B-SB-3.0-3.5 Soil | 7466272 |
| SVL-538-SA5B-SB-1.5-2.0 Soil | 7466273 |
| SVL-566-SA5B-SB-2.0-2.5 Soil | 7466274 |
| EB2-051514 Water | 7466275 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB-051514 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7466271**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:00

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB-15 SDG#: PH178-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-051514 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7466271**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:00

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB-15 SDG#: PH178-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141392AA | 05/20/2014 00:02 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141392AA | 05/20/2014 00:02 | Kevin A Sposito | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-534-SA5B-SB-3.0-3.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7466272**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:10 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-534- SDG#: PH178-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 7 | 0.89 |
| 10237 | Acrolein | 107-02-8 | 95 | U | 95 | 19 | 0.89 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.89 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.89 |
| 10237 | t-Butyl alcohol | 75-65-0 | 47 | U | 47 | 19 | 0.89 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.89 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.89 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-534-SA5B-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466272**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:10 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-534- SDG#: PH178-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.89 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.89 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.89 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.89 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.89 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.89 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 05:13 | Stephanie A Selis | 0.89 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413634514 | 05/16/2014 15:48 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-534-SA5B-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466272**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:10 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-534- SDG#: PH178-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413634514 | 05/16/2014 15:48 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413634514 | 05/16/2014 15:44 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401B | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-538-SA5B-SB-1.5-2.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7466273**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:45 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH178-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 18 | U | 18 | 6 | 0.82 |
| 10237 | Acrolein | 107-02-8 | 90 | U | 90 | 18 | 0.82 |
| 10237 | Acrylonitrile | 107-13-1 | 18 | U | 18 | 4 | 0.82 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Benzene | 71-43-2 | 4 | U | 4 | 0.4 | 0.82 |
| 10237 | Bromobenzene | 108-86-1 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Bromochloromethane | 74-97-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Bromodichloromethane | 75-27-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Bromoform | 75-25-2 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Bromomethane | 74-83-9 | 4 | U | 4 | 2 | 0.82 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.82 |
| 10237 | t-Butyl alcohol | 75-65-0 | 45 | U | 45 | 18 | 0.82 |
| 10237 | n-Butylbenzene | 104-51-8 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | sec-Butylbenzene | 135-98-8 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | tert-Butylbenzene | 98-06-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Carbon Disulfide | 75-15-0 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Chlorobenzene | 108-90-7 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Chloroethane | 75-00-3 | 4 | U | 4 | 2 | 0.82 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.82 |
| 10237 | Chloroform | 67-66-3 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1-Chlorohexane | 544-10-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Chloromethane | 74-87-3 | 4 | U | 4 | 2 | 0.82 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 4 | U | 4 | 2 | 0.82 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 4 | U | 4 | 2 | 0.82 |
| 10237 | Dibromochloromethane | 124-48-1 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Dibromomethane | 74-95-3 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 4 | U | 4 | 2 | 0.82 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Ethylbenzene | 100-41-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Freon 113 | 76-13-1 | 4 | U | 4 | 2 | 0.82 |
| 10237 | Freon 133a | 75-88-7 | 4 | U | 4 | 2 | 0.82 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 4 | U | 4 | 2 | 0.82 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.82 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-538-SA5B-SB-1.5-2.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7466273**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:45 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH178-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Isopropylbenzene | 98-82-8 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Methyl Iodide | 74-88-4 | 4 | U | 4 | 3 | 0.82 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 4 | U | 4 | 0.4 | 0.82 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.82 |
| 10237 | Methylene Chloride | 75-09-2 | 4 | U | 4 | 2 | 0.82 |
| 10237 | n-Propylbenzene | 103-65-1 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Styrene | 100-42-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Tetrachloroethene | 127-18-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Toluene | 108-88-3 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Trichloroethene | 79-01-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 4 | U | 4 | 2 | 0.82 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.82 |
| 10237 | Vinyl Chloride | 75-01-4 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | m+p-Xylene | 179601-23-1 | 4 | U | 4 | 0.9 | 0.82 |
| 10237 | o-Xylene | 95-47-6 | 4 | U | 4 | 0.9 | 0.82 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 05:35 | Stephanie A Selis | 0.82 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413634514 | 05/16/2014 15:48 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-538-SA5B-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466273**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 08:45 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-538- SDG#: PH178-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413634514 | 05/16/2014 15:48 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413634514 | 05/16/2014 15:42 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401B | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-566-SA5B-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466274**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 14:58 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-566- SDG#: PH178-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 7 | 0.93 |
| 10237 | Acrolein | 107-02-8 | 95 | U | 95 | 19 | 0.93 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.93 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.93 |
| 10237 | t-Butyl alcohol | 75-65-0 | 47 | U | 47 | 19 | 0.93 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.93 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.93 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-566-SA5B-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466274**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 14:58 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-566- SDG#: PH178-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.93 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.93 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.93 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.93 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.93 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.93 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.5 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 05:57 | Stephanie A Selis | 0.93 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413634514 | 05/16/2014 15:48 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-566-SA5B-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466274**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 14:58 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-566- SDG#: PH178-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413634514 | 05/16/2014 15:48 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413634514 | 05/16/2014 15:46 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401B | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051514 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7466275**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 09:05 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB152 SDG#: PH178-05EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-051514 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7466275**
**LL Group # 1474888**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/15/2014 09:05 by RE

Submitted: 05/16/2014 10:10
Reported: 05/29/2014 14:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB152 SDG#: PH178-05EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141392AA | 05/20/2014 00:24 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141392AA | 05/20/2014 00:24 | Kevin A Sposito | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474888
Reported: 05/29/14 at 02:13 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7466272-7466274 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 108 | 112 | 41-149 | 3 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 92 | 88 | 50-137 | 5 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 91 | 88 | 58-123 | 3 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 86 | 88 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 96 | 93 | 80-120 | 3 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 120 | 117 | 75-129 | 2 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 96 | 95 | 75-120 | 1 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 102 | 96 | 70-126 | 6 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 109 | 108 | 32-162 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 98 | 99 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 93 | 99 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 95 | 93 | 72-120 | 2 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 97 | 93 | 69-120 | 4 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 94 | 95 | 75-120 | 1 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 73 | 71 | 63-128 | 3 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 98 | 96 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 100 | 95 | 80-120 | 5 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 102 | 101 | 17-171 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 87 | 90 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 108 | 106 | 80-120 | 2 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 91 | 85 | 70-130 | 6 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 89 | 85 | 56-120 | 4 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 93 | 93 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 94 | 96 | 79-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 95 | 89 | 22-131 | 6 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 79 | 90 | 50-132 | 13 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 99 | 95 | 77-120 | 4 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 80-120 | 2 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 75-120 | 2 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 98 | 80-120 | 5 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 102 | 80-120 | 10 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 74 | 71 | 26-137 | 5 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 96 | 71-122 | 2 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 110 | 108 | 66-136 | 1 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 103 | 100 | 73-129 | 3 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 100 | 80-120 | 4 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 106 | 103 | 79-120 | 3 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 96 | 97 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 73-120 | 1 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 90 | 88 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474888
Reported: 05/29/14 at 02:13 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 100 | 96 | 77-120 | 4 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 74-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 88 | 86 | 69-120 | 2 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 88 | 89 | 59-134 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 98 | 94 | 80-120 | 4 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 74 | 71 | 64-137 | 3 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 118 | 113 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 105 | 105 | 46-130 | 0 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 86 | 85 | 40-129 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 68-128 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 101 | 97 | 76-120 | 4 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 89 | 88 | 69-120 | 2 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 102 | 99 | 72-130 | 3 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 93 | 91 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 91 | 92 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 104 | 103 | 80-124 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 96 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 101 | 96 | 76-120 | 4 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 95 | 80-120 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 86 | 93 | 71-123 | 8 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 106 | 103 | 78-120 | 3 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 94 | 89 | 80-120 | 5 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 105 | 100 | 64-120 | 5 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 97 | 99 | 68-120 | 3 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 63-135 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 100 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 102 | 101 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 91 | 86 | 58-133 | 5 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 94 | 100 | 71-123 | 6 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 79-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 94 | 95 | 78-120 | 2 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 74 | 70 | 40-127 | 6 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | 92 | 59-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | 97 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 97 | 94 | 80-120 | 3 | 30 |
| Batch number: Y141392AA | Sample number(s): 7466271,7466275 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 84 | 84 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 87 | 87 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 85 | 88 | 62-120 | 4 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 103 | 104 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 2 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 89 | 89 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 92 | 92 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 83 | 82 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 54-133 | 1 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 99 | 100 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 68-120 | 1 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 95 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 91 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 74-130 | 0 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474888
Reported: 05/29/14 at 02:13 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 83 | 83 | 56-120 | 0 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 98 | 99 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 105 | 104 | 80-120 | 0 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 97 | 97 | 63-120 | 0 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 99 | 97 | 80-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 42* | 42* | 47-120 | 0 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 93 | 94 | 56-120 | 2 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 2 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 100 | 97 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 48-132 | 0 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 102 | 104 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 67-124 | 0 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 108 | 108 | 80-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 109 | 110 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 85 | 87 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 86 | 84 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 92 | 92 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 95 | 94 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 51-124 | 0 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 70-120 | 1 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 58-126 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 92 | 93 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 108 | 107 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 97 | 96 | 76-120 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 98 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 79 | 80 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474888
Reported: 05/29/14 at 02:13 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Batch number: 14141162401B | Sample number(s): 7466272-7466274 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7466272-7466274 UNSPK: P475237 | | | | | | | | |
| Acetone | 109 | 118 | 31-195 | 7 | 30 | | | | |
| Acrolein | 87 | 71 | 10-165 | 22 | 30 | | | | |
| Acrylonitrile | 75 | 82 | 48-139 | 8 | 30 | | | | |
| t-Amyl methyl ether | 83 | 85 | 50-132 | 2 | 30 | | | | |
| Benzene | 101 | 94 | 55-143 | 8 | 30 | | | | |
| Bromobenzene | 109 | 92 | 43-139 | 18 | 30 | | | | |
| Bromochloromethane | 118 | 110 | 60-137 | 8 | 30 | | | | |
| Bromodichloromethane | 98 | 91 | 53-136 | 8 | 30 | | | | |
| Bromoform | 94 | 91 | 50-144 | 4 | 30 | | | | |
| Bromomethane | 121 | 111 | 42-168 | 9 | 30 | | | | |
| 2-Butanone | 85 | 93 | 37-163 | 8 | 30 | | | | |
| t-Butyl alcohol | 95 | 88 | 47-153 | 8 | 30 | | | | |
| n-Butylbenzene | 115 | 76 | 30-146 | 42* | 30 | | | | |
| sec-Butylbenzene | 109 | 88 | 33-157 | 23 | 30 | | | | |
| tert-Butylbenzene | 108 | 86 | 41-152 | 23 | 30 | | | | |
| Carbon Disulfide | 78 | 71 | 48-146 | 9 | 30 | | | | |
| Carbon Tetrachloride | 109 | 100 | 51-165 | 9 | 30 | | | | |
| Chlorobenzene | 105 | 93 | 49-135 | 13 | 30 | | | | |
| Chloroethane | 114 | 106 | 39-152 | 8 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 73 | 76 | 32-139 | 3 | 30 | | | | |
| Chloroform | 111 | 105 | 61-142 | 7 | 30 | | | | |
| 1-Chlorohexane | 106 | 89 | 70-130 | 18 | 30 | | | | |
| Chloromethane | 102 | 93 | 36-143 | 9 | 30 | | | | |
| 2-Chlorotoluene | 105 | 88 | 42-146 | 18 | 30 | | | | |
| 4-Chlorotoluene | 108 | 85 | 39-145 | 24 | 30 | | | | |
| Chlorotrifluoroethene | 109 | 105 | 70-130 | 0 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 79 | 74 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 97 | 90 | 51-128 | 8 | 30 | | | | |
| 1,2-Dibromoethane | 95 | 91 | 54-129 | 5 | 30 | | | | |
| Dibromomethane | 95 | 93 | 57-130 | 3 | 30 | | | | |
| 1,2-Dichlorobenzene | 111 | 89 | 36-133 | 24 | 30 | | | | |
| 1,3-Dichlorobenzene | 108 | 86 | 34-134 | 24 | 30 | | | | |
| 1,4-Dichlorobenzene | 108 | 83 | 35-136 | 27 | 30 | | | | |
| Dichlorodifluoromethane | 106 | 102 | 26-151 | 5 | 30 | | | | |
| 1,1-Dichloroethane | 100 | 95 | 63-142 | 7 | 30 | | | | |
| 1,2-Dichloroethane | 108 | 104 | 54-143 | 5 | 30 | | | | |
| 1,1-Dichloroethene | 111 | 105 | 61-149 | 6 | 30 | | | | |
| cis-1,2-Dichloroethene | 103 | 98 | 67-135 | 6 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474888
Reported: 05/29/14 at 02:13 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 111 | 103 | 64-144 | 9 | 30 | | | | |
| 1,2-Dichloropropane | 97 | 93 | 54-144 | 6 | 30 | | | | |
| 1,3-Dichloropropane | 94 | 89 | 51-140 | 6 | 30 | | | | |
| 2,2-Dichloropropane | 94 | 88 | 53-147 | 8 | 30 | | | | |
| 1,1-Dichloropropene | 106 | 97 | 54-145 | 10 | 30 | | | | |
| cis-1,3-Dichloropropene | 88 | 86 | 45-137 | 3 | 30 | | | | |
| trans-1,3-Dichloropropene | 85 | 82 | 51-134 | 5 | 30 | | | | |
| Ethyl t-butyl ether | 85 | 87 | 58-124 | 2 | 30 | | | | |
| Ethylbenzene | 102 | 91 | 44-141 | 13 | 30 | | | | |
| Freon 113 | 102 | 91 | 56-156 | 12 | 30 | | | | |
| Freon 133a | 118 | 116 | 61-131 | 2 | 30 | | | | |
| Hexachlorobutadiene | 127 | 75 | 10-155 | 53* | 30 | | | | |
| 2-Hexanone | 74 | 81 | 32-160 | 8 | 30 | | | | |
| di-Isopropyl ether | 91 | 90 | 59-133 | 3 | 30 | | | | |
| Isopropylbenzene | 108 | 89 | 38-144 | 21 | 30 | | | | |
| p-Isopropyltoluene | 103 | 79 | 29-152 | 28 | 30 | | | | |
| Methyl Iodide | 106 | 99 | 52-139 | 8 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 86 | 90 | 55-129 | 4 | 30 | | | | |
| 4-Methyl-2-pentanone | 75 | 82 | 46-139 | 9 | 30 | | | | |
| Methylene Chloride | 107 | 100 | 60-149 | 7 | 30 | | | | |
| n-Propylbenzene | 111 | 88 | 39-157 | 23 | 30 | | | | |
| Styrene | 105 | 90 | 35-134 | 16 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 101 | 92 | 55-139 | 11 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 88 | 87 | 29-182 | 2 | 30 | | | | |
| Tetrachloroethene | 134 | 112 | 42-149 | 19 | 30 | | | | |
| Toluene | 102 | 87 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 104 | 75 | 10-140 | 33* | 30 | | | | |
| 1,2,4-Trichlorobenzene | 102 | 73 | 10-136 | 33* | 30 | | | | |
| 1,1,1-Trichloroethane | 99 | 93 | 52-146 | 7 | 30 | | | | |
| 1,1,2-Trichloroethane | 99 | 95 | 58-152 | 5 | 30 | | | | |
| Trichloroethene | 105 | 97 | 53-144 | 9 | 30 | | | | |
| Trichlorofluoromethane | 116 | 104 | 47-163 | 12 | 30 | | | | |
| 1,2,3-Trichloropropane | 95 | 91 | 36-180 | 5 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 104 | 86 | 37-149 | 20 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 109 | 87 | 38-150 | 24 | 30 | | | | |
| Vinyl Acetate | 46 | 40 | 21-139 | 12 | 30 | | | | |
| Vinyl Chloride | 111 | 100 | 50-154 | 11 | 30 | | | | |
| m+p-Xylene | 104 | 88 | 44-137 | 18 | 30 | | | | |
| o-Xylene | 101 | 89 | 42-137 | 14 | 30 | | | | |
| Batch number: 14141162401B | Sample number(s): 7466272-7466274 | | | | | BKG: P466734 | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.8 | 5.2 | 8 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1474888
Reported: 05/29/14 at 02:13 PM

## Surrogate Quality Control

Batch number: B141491AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7466272 | 106 | 105 | 97 | 93 |
| 7466273 | 107 | 97 | 96 | 92 |
| 7466274 | 107 | 103 | 96 | 91 |
| Blank | 109 | 104 | 97 | 94 |
| LCS | 106 | 105 | 97 | 109 |
| LCSD | 106 | 103 | 98 | 102 |
| MS | 104 | 98 | 103 | 100 |
| MSD | 106 | 105 | 102 | 102 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141392AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7466271 | 98 | 99 | 99 | 95 |
| 7466275 | 100 | 101 | 99 | 95 |
| Blank | 99 | 100 | 99 | 95 |
| LCS | 99 | 102 | 100 | 100 |
| LCSD | 98 | 102 | 101 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/15/2014
CarrierName: FedEx
AirbillNo: 798876647098

A-13013
G-1474888
S-746627I-75

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140515-03
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Methyl Mercury 1630 | Organotin | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-051514 | 5/15/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SVL-534-SA5B-SB-3.0-3.5 | 5/15/14 08:10 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SVL-534-SA5B-SB-3.0-3.5 | 5/15/14 08:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-538-SA5B-SB-1.5-2.0 | 5/15/14 08:45 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SVL-538-SA5B-SB-1.5-2.0 | 5/15/14 08:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-566-SA5B-SB-2.0-2.5 | 5/15/14 14:58 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SVL-566-SA5B-SB-2.0-2.5 | 5/15/14 14:58 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 05/15/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/16/14 | 1010 |
| | | | | | | | | | | | |

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/15/2014
CarrierName: FedEx
AirbillNo: 798876647098

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140515-06
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

A-13013
G-1474888
S-746627I-75

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB2-051514 | 5/15/14 09:05 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Skyler Mypelos | 5/15/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/16/14 | 1010 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14684

Group Number(s): 1774888

Client: CDM

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/16/2014 10:10 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCl |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Wesley Miller (2308) at 11:11 on 05/16/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 1.1 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 27, 2014

Project: SSFL Phase 3 Sampling

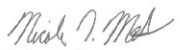
Submittal Date: 05/14/2014
Group Number: 1475001
SDG: PH180
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-051314 Water | 7466838 |
| SVL-532-SA5B-SB-4.0-5.0 Soil | 7466839 |
| SVL-532-SA5B-SB-4.0-5.0 MS Soil | 7466840 |
| SVL-532-SA5B-SB-4.0-5.0 MSD Soil | 7466841 |
| SVL-832-SA5B-SB-4.0-5.0 Soil | 7466842 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB2-051314 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7466838**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:00

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

2TB-- SDG#: PH180-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-051314 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7466838**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:00

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

2TB-- SDG#: PH180-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141392AA | 05/20/2014 00:45 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141392AA | 05/20/2014 00:45 | Kevin A Sposito | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-532-SA5B-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7466839**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 6 | 0.85 |
| 10237 | Acrolein | 107-02-8 | 93 | U | 93 | 19 | 0.85 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.85 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.85 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.85 |
| 10237 | t-Butyl alcohol | 75-65-0 | 46 | U | 46 | 19 | 0.85 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.85 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.85 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.85 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.85 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.85 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466839**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.85 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.85 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.85 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.85 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.85 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.85 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.85 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 18:03 | Christopher G Torres | 0.85 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466839**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413934539 | 05/14/2014 16:31 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5B-SB-4.0-5.0 MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466840**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 200 | 21 | 7 | 0.97 |
| 10237 | Acrolein | 107-02-8 | 110 | 110 | 21 | 0.97 |
| 10237 | Acrylonitrile | 107-13-1 | 100 | 21 | 4 | 0.97 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 23 | 5 | 1 | 0.97 |
| 10237 | Benzene | 71-43-2 | 26 | 5 | 0.5 | 0.97 |
| 10237 | Bromobenzene | 108-86-1 | 28 | 5 | 1 | 0.97 |
| 10237 | Bromochloromethane | 74-97-5 | 27 | 5 | 1 | 0.97 |
| 10237 | Bromodichloromethane | 75-27-4 | 27 | 5 | 1 | 0.97 |
| 10237 | Bromoform | 75-25-2 | 28 | 5 | 1 | 0.97 |
| 10237 | Bromomethane | 74-83-9 | 25 | 5 | 2 | 0.97 |
| 10237 | 2-Butanone | 78-93-3 | 170 | 11 | 4 | 0.97 |
| 10237 | t-Butyl alcohol | 75-65-0 | 250 | 53 | 21 | 0.97 |
| 10237 | n-Butylbenzene | 104-51-8 | 25 | 5 | 1 | 0.97 |
| 10237 | sec-Butylbenzene | 135-98-8 | 28 | 5 | 1 | 0.97 |
| 10237 | tert-Butylbenzene | 98-06-6 | 26 | 5 | 1 | 0.97 |
| 10237 | Carbon Disulfide | 75-15-0 | 25 | 5 | 1 | 0.97 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 32 | 5 | 1 | 0.97 |
| 10237 | Chlorobenzene | 108-90-7 | 27 | 5 | 1 | 0.97 |
| 10237 | Chloroethane | 75-00-3 | 24 | 5 | 2 | 0.97 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 16 | 11 | 2 | 0.97 |
| 10237 | Chloroform | 67-66-3 | 30 | 5 | 1 | 0.97 |
| 10237 | 1-Chlorohexane | 544-10-5 | 22 | 5 | 1 | 0.97 |
| 10237 | Chloromethane | 74-87-3 | 21 | 5 | 2 | 0.97 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 26 | 5 | 1 | 0.97 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 26 | 5 | 1 | 0.97 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 15 | 5 | 2 | 0.99 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 21 | 5 | 2 | 0.97 |
| 10237 | Dibromochloromethane | 124-48-1 | 27 | 5 | 1 | 0.97 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 26 | 5 | 1 | 0.97 |
| 10237 | Dibromomethane | 74-95-3 | 26 | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 26 | 5 | 1 | 0.97 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 27 | 5 | 1 | 0.97 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 26 | 5 | 1 | 0.97 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 26 | 5 | 2 | 0.97 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 27 | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 32 | 5 | 1 | 0.97 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 30 | 5 | 1 | 0.97 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 27 | 5 | 1 | 0.97 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 30 | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 25 | 5 | 1 | 0.97 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 24 | 5 | 1 | 0.97 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 27 | 5 | 1 | 0.97 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 28 | 5 | 1 | 0.97 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 25 | 5 | 1 | 0.97 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 24 | 5 | 1 | 0.97 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 23 | 5 | 1 | 0.97 |
| 10237 | Ethylbenzene | 100-41-4 | 28 | 5 | 1 | 0.97 |
| 10237 | Freon 113 | 76-13-1 | 30 | 5 | 2 | 0.97 |
| 10237 | Freon 133a | 75-88-7 | 22 | 5 | 2 | 0.99 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 29 | 5 | 2 | 0.97 |
| 10237 | 2-Hexanone | 591-78-6 | 100 | 11 | 3 | 0.97 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-532-SA5B-SB-4.0-5.0 MS Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7466840**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 24 | 5 | 1 | 0.97 |
| 10237 | Isopropylbenzene | 98-82-8 | 29 | 5 | 1 | 0.97 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 25 | 5 | 1 | 0.97 |
| 10237 | Methyl Iodide | 74-88-4 | 31 | 5 | 3 | 0.97 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 26 | 5 | 0.5 | 0.97 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 110 | 11 | 3 | 0.97 |
| 10237 | Methylene Chloride | 75-09-2 | 40 | 5 | 2 | 0.97 |
| 10237 | n-Propylbenzene | 103-65-1 | 27 | 5 | 1 | 0.97 |
| 10237 | Styrene | 100-42-5 | 27 | 5 | 1 | 0.97 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 28 | 5 | 1 | 0.97 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 22 | 5 | 1 | 0.97 |
| 10237 | Tetrachloroethene | 127-18-4 | 32 | 5 | 1 | 0.97 |
| 10237 | Toluene | 108-88-3 | 25 | 5 | 1 | 0.97 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 23 | 5 | 1 | 0.97 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 24 | 5 | 1 | 0.97 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 28 | 5 | 1 | 0.97 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 26 | 5 | 1 | 0.97 |
| 10237 | Trichloroethene | 79-01-6 | 28 | 5 | 1 | 0.97 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 27 | 5 | 2 | 0.97 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 25 | 5 | 1 | 0.97 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 27 | 5 | 1 | 0.97 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 27 | 5 | 1 | 0.97 |
| 10237 | Vinyl Acetate | 108-05-4 | 32 | 11 | 2 | 0.99 |
| 10237 | Vinyl Chloride | 75-01-4 | 22 | 5 | 1 | 0.97 |
| 10237 | m+p-Xylene | 179601-23-1 | 54 | 5 | 1 | 0.97 |
| 10237 | o-Xylene | 95-47-6 | 26 | 5 | 1 | 0.97 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 8.1 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 18:25 | Christopher G Torres | 0.97 |
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 19:10 | Christopher G Torres | 0.99 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5B-SB-4.0-5.0 MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466840**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413934539 | 05/14/2014 16:33 | Mitchell R Washel | n.a. |
| 00374 | GC/MS - Bulk Soil Prep | SW-846 5035A Modified | 1 | 201414334601 | 05/23/2014 13:41 | Lisa J Cooke | n.a. |
| 00374 | GC/MS - Bulk Soil Prep | SW-846 5035A Modified | 2 | 201414334601 | 05/23/2014 13:41 | Lisa J Cooke | n.a. |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5B-SB-4.0-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466841**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 180 | 22 | 8 | 1 |
| 10237 | Acrolein | 107-02-8 | 130 | 110 | 22 | 1 |
| 10237 | Acrylonitrile | 107-13-1 | 89 | 22 | 4 | 1 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 20 | 5 | 1 | 1 |
| 10237 | Benzene | 71-43-2 | 22 | 5 | 0.5 | 1 |
| 10237 | Bromobenzene | 108-86-1 | 24 | 5 | 1 | 1 |
| 10237 | Bromochloromethane | 74-97-5 | 26 | 5 | 1 | 1 |
| 10237 | Bromodichloromethane | 75-27-4 | 22 | 5 | 1 | 1 |
| 10237 | Bromoform | 75-25-2 | 23 | 5 | 1 | 1 |
| 10237 | Bromomethane | 74-83-9 | 27 | 5 | 2 | 1 |
| 10237 | 2-Butanone | 78-93-3 | 150 | 11 | 4 | 1 |
| 10237 | t-Butyl alcohol | 75-65-0 | 250 | 54 | 22 | 1 |
| 10237 | n-Butylbenzene | 104-51-8 | 22 | 5 | 1 | 1 |
| 10237 | sec-Butylbenzene | 135-98-8 | 22 | 5 | 1 | 1 |
| 10237 | tert-Butylbenzene | 98-06-6 | 23 | 5 | 1 | 1 |
| 10237 | Carbon Disulfide | 75-15-0 | 20 | 5 | 1 | 1 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 27 | 5 | 1 | 1 |
| 10237 | Chlorobenzene | 108-90-7 | 22 | 5 | 1 | 1 |
| 10237 | Chloroethane | 75-00-3 | 25 | 5 | 2 | 1 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 20 | 11 | 2 | 1 |
| 10237 | Chloroform | 67-66-3 | 26 | 5 | 1 | 1 |
| 10237 | 1-Chlorohexane | 544-10-5 | 21 | 5 | 1 | 1 |
| 10237 | Chloromethane | 74-87-3 | 22 | 5 | 2 | 1 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 23 | 5 | 1 | 1 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 23 | 5 | 1 | 1 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 16 | 5 | 2 | 0.97 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 20 | 5 | 2 | 1 |
| 10237 | Dibromochloromethane | 124-48-1 | 23 | 5 | 1 | 1 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 21 | 5 | 1 | 1 |
| 10237 | Dibromomethane | 74-95-3 | 22 | 5 | 1 | 1 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 23 | 5 | 1 | 1 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 23 | 5 | 1 | 1 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 22 | 5 | 1 | 1 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 26 | 5 | 2 | 1 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 22 | 5 | 1 | 1 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 26 | 5 | 1 | 1 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 25 | 5 | 1 | 1 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 23 | 5 | 1 | 1 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 25 | 5 | 1 | 1 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 21 | 5 | 1 | 1 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 20 | 5 | 1 | 1 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 23 | 5 | 1 | 1 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 24 | 5 | 1 | 1 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 20 | 5 | 1 | 1 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 20 | 5 | 1 | 1 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 20 | 5 | 1 | 1 |
| 10237 | Ethylbenzene | 100-41-4 | 23 | 5 | 1 | 1 |
| 10237 | Freon 113 | 76-13-1 | 25 | 5 | 2 | 1 |
| 10237 | Freon 133a | 75-88-7 | 23 | 5 | 2 | 0.97 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 25 | 5 | 2 | 1 |
| 10237 | 2-Hexanone | 591-78-6 | 87 | 11 | 3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5B-SB-4.0-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466841**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 20 | 5 | 1 | 1 |
| 10237 | Isopropylbenzene | 98-82-8 | 24 | 5 | 1 | 1 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 22 | 5 | 1 | 1 |
| 10237 | Methyl Iodide | 74-88-4 | 26 | 5 | 3 | 1 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 22 | 5 | 0.5 | 1 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 90 | 11 | 3 | 1 |
| 10237 | Methylene Chloride | 75-09-2 | 52 | 5 | 2 | 1 |
| 10237 | n-Propylbenzene | 103-65-1 | 24 | 5 | 1 | 1 |
| 10237 | Styrene | 100-42-5 | 22 | 5 | 1 | 1 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 23 | 5 | 1 | 1 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 19 | 5 | 1 | 1 |
| 10237 | Tetrachloroethene | 127-18-4 | 26 | 5 | 1 | 1 |
| 10237 | Toluene | 108-88-3 | 22 | 5 | 1 | 1 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 21 | 5 | 1 | 1 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 21 | 5 | 1 | 1 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 23 | 5 | 1 | 1 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 22 | 5 | 1 | 1 |
| 10237 | Trichloroethene | 79-01-6 | 24 | 5 | 1 | 1 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 28 | 5 | 2 | 1 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 21 | 5 | 1 | 1 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 23 | 5 | 1 | 1 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 24 | 5 | 1 | 1 |
| 10237 | Vinyl Acetate | 108-05-4 | 25 | 11 | 2 | 0.97 |
| 10237 | Vinyl Chloride | 75-01-4 | 23 | 5 | 1 | 1 |
| 10237 | m+p-Xylene | 179601-23-1 | 45 | 5 | 1 | 1 |
| 10237 | o-Xylene | 95-47-6 | 21 | 5 | 1 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 8.1 | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 8.0 | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 18:48 | Christopher G Torres | 1 |
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 19:32 | Christopher G Torres | 0.97 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5B-SB-4.0-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466841**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:40 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40536 SDG#: PH180-02MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413934539 | 05/14/2014 16:35 | Mitchell R Washel | n.a. |
| 00374 | GC/MS - Bulk Soil Prep | SW-846 5035A Modified | 1 | 201414334601 | 05/23/2014 13:41 | Lisa J Cooke | n.a. |
| 00374 | GC/MS - Bulk Soil Prep | SW-846 5035A Modified | 2 | 201414334601 | 05/23/2014 13:41 | Lisa J Cooke | n.a. |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-832-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466842**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:45 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40836 SDG#: PH180-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 7 | 0.87 |
| 10237 | Acrolein | 107-02-8 | 93 | U | 93 | 19 | 0.87 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.87 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.87 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.87 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.87 |
| 10237 | t-Butyl alcohol | 75-65-0 | 47 | U | 47 | 19 | 0.87 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.87 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.87 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.87 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.87 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.87 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.87 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.87 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.87 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.87 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.87 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-832-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466842**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:45 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40836 SDG#: PH180-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.87 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.87 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.87 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.87 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.87 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.87 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.87 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.87 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 19:55 | Christopher G Torres | 0.87 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-832-SA5B-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7466842**
**LL Group # 1475001**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/13/2014 08:45 by RE

Submitted: 05/14/2014 09:50
Reported: 05/27/2014 14:30

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

40836 SDG#: PH180-03*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413934539 | 05/19/2014 10:49 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413934539 | 05/14/2014 16:37 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14136162401B | 05/16/2014 18:04 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475001
Reported: 05/27/14 at 02:30 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7466839-7466842 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 98 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 79 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 87 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 92 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 97 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 105 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 121 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 107 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 109 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 94 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 118 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 90 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 113 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 102 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 83 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 113 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 93 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 89 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 64 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 90 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 104 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 101 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 120 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 111 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 92 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 97 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 95 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475001
Reported: 05/27/14 at 02:30 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 91 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 90 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 97 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 98 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 118 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 93 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 92 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 116 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 102 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 85 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 105 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 106 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 91 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 96 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 100 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 105 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 105 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 71 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Batch number: Y141392AA | Sample number(s): 7466838 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 84 | 84 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 87 | 87 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 85 | 88 | 62-120 | 4 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 103 | 104 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 2 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 89 | 89 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 92 | 92 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 83 | 82 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 54-133 | 1 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 99 | 100 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 68-120 | 1 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 95 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 91 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 74-130 | 0 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475001
Reported: 05/27/14 at 02:30 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 83 | 83 | 56-120 | 0 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 98 | 99 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 105 | 104 | 80-120 | 0 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 97 | 97 | 63-120 | 0 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 99 | 97 | 80-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 42* | 42* | 47-120 | 0 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 93 | 94 | 56-120 | 2 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 2 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 100 | 97 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 48-132 | 0 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 102 | 104 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 67-124 | 0 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 108 | 108 | 80-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 109 | 110 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 85 | 87 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 86 | 84 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 92 | 92 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 95 | 94 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 51-124 | 0 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 70-120 | 1 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 58-126 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 92 | 93 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 108 | 107 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 97 | 96 | 76-120 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 98 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 79 | 80 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475001
Reported: 05/27/14 at 02:30 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Batch number: 14136162401B | Sample number(s): 7466839-7466842 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7466839-7466842 UNSPK: 7466839 | | | | | | | | |
| Acetone | 129 | 113 | 31-195 | 11 | 30 | | | | |
| Acrolein | 67 | 81 | 10-165 | 21 | 30 | | | | |
| Acrylonitrile | 96 | 82 | 48-139 | 13 | 30 | | | | |
| t-Amyl methyl ether | 111 | 94 | 50-132 | 14 | 30 | | | | |
| Benzene | 123 | 101 | 55-143 | 17 | 30 | | | | |
| Bromobenzene | 130 | 109 | 43-139 | 15 | 30 | | | | |
| Bromochloromethane | 127 | 120 | 60-137 | 3 | 30 | | | | |
| Bromodichloromethane | 126 | 104 | 53-136 | 17 | 30 | | | | |
| Bromoform | 131 | 105 | 50-144 | 20 | 30 | | | | |
| Bromomethane | 120 | 124 | 42-168 | 6 | 30 | | | | |
| 2-Butanone | 110 | 95 | 37-163 | 13 | 30 | | | | |
| t-Butyl alcohol | 117 | 115 | 47-153 | 0 | 30 | | | | |
| n-Butylbenzene | 117 | 101 | 30-146 | 12 | 30 | | | | |
| sec-Butylbenzene | 131 | 102 | 33-157 | 22 | 30 | | | | |
| tert-Butylbenzene | 125 | 108 | 41-152 | 13 | 30 | | | | |
| Carbon Disulfide | 118 | 94 | 48-146 | 20 | 30 | | | | |
| Carbon Tetrachloride | 152 | 123 | 51-165 | 18 | 30 | | | | |
| Chlorobenzene | 130 | 102 | 49-135 | 22 | 30 | | | | |
| Chloroethane | 113 | 117 | 39-152 | 6 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 76 | 92 | 32-139 | 21 | 30 | | | | |
| Chloroform | 144* | 119 | 61-142 | 17 | 30 | | | | |
| 1-Chlorohexane | 104 | 98 | 70-130 | 4 | 30 | | | | |
| Chloromethane | 98 | 99 | 36-143 | 4 | 30 | | | | |
| 2-Chlorotoluene | 123 | 104 | 42-146 | 14 | 30 | | | | |
| 4-Chlorotoluene | 122 | 104 | 39-145 | 13 | 30 | | | | |
| Chlorotrifluoroethene | 72 | 76 | 70-130 | 3 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 98 | 90 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 129* | 105 | 51-128 | 18 | 30 | | | | |
| 1,2-Dibromoethane | 122 | 99 | 54-129 | 19 | 30 | | | | |
| Dibromomethane | 124 | 103 | 57-130 | 17 | 30 | | | | |
| 1,2-Dichlorobenzene | 123 | 108 | 36-133 | 11 | 30 | | | | |
| 1,3-Dichlorobenzene | 128 | 104 | 34-134 | 19 | 30 | | | | |
| 1,4-Dichlorobenzene | 122 | 103 | 35-136 | 14 | 30 | | | | |
| Dichlorodifluoromethane | 121 | 122 | 26-151 | 3 | 30 | | | | |
| 1,1-Dichloroethane | 127 | 103 | 63-142 | 18 | 30 | | | | |
| 1,2-Dichloroethane | 149* | 120 | 54-143 | 19 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475001
Reported: 05/27/14 at 02:30 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 142 | 117 | 61-149 | 17 | 30 | | | | |
| cis-1,2-Dichloroethene | 128 | 105 | 67-135 | 18 | 30 | | | | |
| trans-1,2-Dichloroethene | 140 | 113 | 64-144 | 19 | 30 | | | | |
| 1,2-Dichloropropane | 116 | 97 | 54-144 | 16 | 30 | | | | |
| 1,3-Dichloropropane | 114 | 92 | 51-140 | 18 | 30 | | | | |
| 2,2-Dichloropropane | 129 | 104 | 53-147 | 19 | 30 | | | | |
| 1,1-Dichloropropene | 134 | 110 | 54-145 | 17 | 30 | | | | |
| cis-1,3-Dichloropropene | 117 | 93 | 45-137 | 20 | 30 | | | | |
| trans-1,3-Dichloropropene | 113 | 92 | 51-134 | 18 | 30 | | | | |
| Ethyl t-butyl ether | 110 | 94 | 58-124 | 13 | 30 | | | | |
| Ethylbenzene | 131 | 104 | 44-141 | 21 | 30 | | | | |
| Freon 113 | 142 | 115 | 56-156 | 18 | 30 | | | | |
| Freon 133a | 101 | 107 | 61-131 | 4 | 30 | | | | |
| Hexachlorobutadiene | 139 | 115 | 10-155 | 17 | 30 | | | | |
| 2-Hexanone | 96 | 81 | 32-160 | 15 | 30 | | | | |
| di-Isopropyl ether | 112 | 94 | 59-133 | 15 | 30 | | | | |
| Isopropylbenzene | 136 | 110 | 38-144 | 19 | 30 | | | | |
| p-Isopropyltoluene | 117 | 100 | 29-152 | 13 | 30 | | | | |
| Methyl Iodide | 148* | 120 | 52-139 | 18 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 121 | 101 | 55-129 | 15 | 30 | | | | |
| 4-Methyl-2-pentanone | 100 | 83 | 46-139 | 16 | 30 | | | | |
| Methylene Chloride | 188* | 238* | 60-149 | 26 | 30 | | | | |
| n-Propylbenzene | 128 | 109 | 39-157 | 14 | 30 | | | | |
| Styrene | 128 | 102 | 35-134 | 20 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 134 | 106 | 55-139 | 21 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 104 | 89 | 29-182 | 13 | 30 | | | | |
| Tetrachloroethene | 151* | 122 | 42-149 | 19 | 30 | | | | |
| Toluene | 120 | 100 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 111 | 96 | 10-140 | 12 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 114 | 98 | 10-136 | 12 | 30 | | | | |
| 1,1,1-Trichloroethane | 131 | 106 | 52-146 | 19 | 30 | | | | |
| 1,1,2-Trichloroethane | 123 | 99 | 58-152 | 19 | 30 | | | | |
| Trichloroethene | 132 | 109 | 53-144 | 17 | 30 | | | | |
| Trichlorofluoromethane | 127 | 127 | 47-163 | 2 | 30 | | | | |
| 1,2,3-Trichloropropane | 120 | 98 | 36-180 | 18 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 127 | 108 | 37-149 | 14 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 126 | 110 | 38-150 | 11 | 30 | | | | |
| Vinyl Acetate | 30 | 23 | 21-139 | 25 | 30 | | | | |
| Vinyl Chloride | 104 | 108 | 50-154 | 6 | 30 | | | | |
| m+p-Xylene | 129 | 104 | 44-137 | 19 | 30 | | | | |
| o-Xylene | 124 | 99 | 42-137 | 20 | 30 | | | | |
| Batch number: 14136162401B | Sample number(s): 7466839-7466842 | | | | | BKG: P462593 | | | |
| 14a Moisture Content by 160.3 | | | | | | 8.1 | 8.0 | 1 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 8.1 | 8.0 | 1 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 8.1 | 8.0 | 1 | 20 |

## Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475001
Reported: 05/27/14 at 02:30 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141431AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7466839 | 109 | 98 | 98 | 96 |
| 7466840 | 110 | 103 | 101 | 104 |
| 7466841 | 111 | 105 | 97 | 95 |
| 7466842 | 109 | 100 | 99 | 96 |
| Blank | 110 | 100 | 99 | 97 |
| LCS | 108 | 106 | 102 | 105 |
| MS | 110 | 103 | 101 | 104 |
| MSD | 111 | 105 | 97 | 95 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141392AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7466838 | 99 | 103 | 100 | 96 |
| Blank | 99 | 100 | 99 | 95 |
| LCS | 99 | 102 | 100 | 100 |
| LCSD | 98 | 102 | 101 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

A-13013 G-~~1474152~~ 1475001 S-~~7462588-97~~ 7466838-42 CMC 5/15/14 (3)

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 5/13/2014 | Contact Name: | Pam Hartman | COC No: | 20140513-02 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1 |
| AirbillNo: | 798848021746 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-051314 | 5/13/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-536-SA5B-SB-4.0-5.0MS | 5/13/14 08:40 | SO | None | 9 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | ms/msd |
| SVL-536-SA5B-SB-4.0-5.0MS | 5/13/14 08:40 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture. MS/MSD |
| SVL-836-SA5B-SB-4.0-5.0 | 5/13/14 08:45 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-836-SA5B-SB-4.0-5.0 | 5/13/14 08:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steve Myrel | 05/13/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Bruce Bu | 5.14.14 | 950 |

COC Rev 3

COC: 20140513-02, Page 1 of 1

1 of 1

**Nicole Maljovec** 13013/147500l/7466838-42 NLM 5/17/14

**From:** Mysel, Stefanie <MyselSJ@cdmsmith.com>
**Sent:** Wednesday, May 14, 2014 11:51 AM
**To:** Nicole Maljovec
**Cc:** Burgesser, Todd; Hartman, Pamela; Zakowski, Cherie
**Subject:** RE: SSFL 05/13/2014 COC
**Attachments:** Lancaster 051314 COC(2)-REV.pdf

Nicole,

COC2 (soil vapor sampling) needs to be revised. The sample ids 536 and 836 need to be changed to 532 and 832 respectively. I have attached a revised relinquished COC.

Stefanie J. Mysel
Geologist

CDM Smith
111 Academy Way
Suite 150
Irvine, CA 92617
Direct: 949-930-9877
Main: 949-752-5452
Cell: 949-579-0634
Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>



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From: Mysel, Stefanie
Sent: Tuesday, May 13, 2014 3:45 PM
To: SAEnvEntry@eurofinsus.com
Cc: Burgesser, Todd; Hartman, Pamela; Mysel, Stefanie
Subject: SSFL 05/13/2014 COC

2 coolers were shipped to your lab for delivery tomorrow. These samples are from today's sampling. Samples were collected from the final data gap sampling and the soil vapor sampling. The airbill number for today's shipment is 798848021746. Let me know if you have any questions or issues. Attached is an excel table with sample names, dates and times from today's sampling. We sent 1 field blank today for Wednesday delivery. We will be sending 2 equipment blanks Wednesday for Thursday delivery and 2 equipment blanks on Thursday for Friday delivery.

Regards,

Stefanie

13013/14750001/74GG838-42

Revised COC
NVM 5/17/14

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/13/2014
CarrierName: FedEx
AirbillNo: 798848021746

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140513-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-051314 | 5/13/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-532-SA5B-SB-4.0-5.0MS | 5/13/14 08:40 | SO | None | 9 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-532-SA5B-SB-4.0-5.0MS | 5/13/14 08:40 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | MS/MSD |
| SVL-832-SA5B-SB-4.0-5.0 | 5/13/14 08:45 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture. MS/MSD |
| SVL-832-SA5B-SB-4.0-5.0 | 5/13/14 08:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

Sampler: Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steph Myropolos | 5/13/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

COC Rev 3



COC 20140513-02, Page 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14419

Group Number(s): ~~1474152~~ 1475001

Client: CDM

Conc 5/15/14

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/14/2014 9:50 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 11:13 on 05/14/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/17/2014
Group Number: 1475119
SDG: PH181
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB-051614 Water | 7467784 |
| SVL-504-SA8-SB-2.0-2.5 Soil | 7467785 |
| SVL-519-SA8-SB-7.5-8.0 Soil | 7467786 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB-051614 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7467784**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 08:00 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB516 SDG#: PH181-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-051614 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7467784**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 08:00 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB516 SDG#: PH181-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141392AA | 05/20/2014 01:06 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141392AA | 05/20/2014 01:06 | Kevin A Sposito | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-504-SA8-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7467785**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 10:00 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

504-- SDG#: PH181-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.97 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.97 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.97 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.97 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.97 |
| 10237 | t-Butyl alcohol | 75-65-0 | 52 | U | 52 | 21 | 0.97 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.97 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.97 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.97 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.97 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.97 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.97 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-504-SA8-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7467785**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 10:00 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

504-- SDG#: PH181-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.97 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.97 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.97 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.97 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.97 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.97 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 20:17 | Christopher G Torres | 0.97 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413734527 | 05/17/2014 14:39 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-504-SA8-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7467785**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 10:00 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

504-- SDG#: PH181-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413734527 | 05/17/2014 14:39 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413734527 | 05/17/2014 14:35 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401B | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-519-SA8-SB-7.5-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7467786**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 11:40 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

519-- SDG#: PH181-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.03 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.03 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.03 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.03 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.03 |
| 10237 | t-Butyl alcohol | 75-65-0 | 54 | U | 54 | 22 | 1.03 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.03 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.03 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.03 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.03 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.03 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.03 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-519-SA8-SB-7.5-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7467786**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 11:40 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

519-- SDG#: PH181-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.03 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.03 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.03 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.03 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.03 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.03 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 20:39 | Christopher G Torres | 1.03 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201413734527 | 05/17/2014 14:39 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-519-SA8-SB-7.5-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7467786**
**LL Group # 1475119**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/16/2014 11:40 by RE

Submitted: 05/17/2014 09:15
Reported: 06/09/2014 12:59

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

519-- SDG#: PH181-03*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201413734527 | 05/17/2014 14:39 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201413734527 | 05/17/2014 14:34 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401B | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475119
Reported: 06/09/14 at 12:59 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7467785-7467786 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 98 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 79 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 87 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 92 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 97 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 105 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 121 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 107 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 109 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 94 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 118 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 90 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 113 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 102 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 83 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 113 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 93 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 89 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 64 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 90 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 104 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 101 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 120 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 111 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 92 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 97 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 95 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475119
Reported: 06/09/14 at 12:59 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 91 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 90 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 97 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 98 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 118 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 93 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 92 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 116 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 102 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 85 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 105 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 106 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 91 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 96 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 100 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 105 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 105 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 71 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Batch number: Y141392AA | Sample number(s): 7467784 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 84 | 84 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 87 | 87 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 85 | 88 | 62-120 | 4 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 103 | 104 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 2 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 89 | 89 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 92 | 92 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 83 | 82 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 54-133 | 1 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 99 | 100 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 68-120 | 1 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 97 | 80-120 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 95 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 91 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 74-130 | 0 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475119
Reported: 06/09/14 at 12:59 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 83 | 83 | 56-120 | 0 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 98 | 99 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 105 | 104 | 80-120 | 0 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 97 | 97 | 63-120 | 0 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 99 | 97 | 80-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 42* | 42* | 47-120 | 0 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 93 | 94 | 56-120 | 2 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 80-120 | 2 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 100 | 97 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 48-132 | 0 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 102 | 104 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 100 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 67-124 | 0 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 108 | 108 | 80-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 109 | 110 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 85 | 87 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 86 | 84 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 92 | 92 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 95 | 94 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 91 | 92 | 51-124 | 0 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 98 | 70-120 | 1 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 58-126 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 92 | 93 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 108 | 107 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 97 | 96 | 76-120 | 1 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 98 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 99 | 98 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 79 | 80 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475119
Reported: 06/09/14 at 12:59 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| Batch number: 14141162401B | Sample number(s): 7467785-7467786 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7467785-7467786 UNSPK: P466839 | | | | | | | | |
| Acetone | 129 | 113 | 31-195 | 11 | 30 | | | | |
| Acrolein | 67 | 81 | 10-165 | 21 | 30 | | | | |
| Acrylonitrile | 96 | 82 | 48-139 | 13 | 30 | | | | |
| t-Amyl methyl ether | 111 | 94 | 50-132 | 14 | 30 | | | | |
| Benzene | 123 | 101 | 55-143 | 17 | 30 | | | | |
| Bromobenzene | 130 | 109 | 43-139 | 15 | 30 | | | | |
| Bromochloromethane | 127 | 120 | 60-137 | 3 | 30 | | | | |
| Bromodichloromethane | 126 | 104 | 53-136 | 17 | 30 | | | | |
| Bromoform | 131 | 105 | 50-144 | 20 | 30 | | | | |
| Bromomethane | 120 | 124 | 42-168 | 6 | 30 | | | | |
| 2-Butanone | 110 | 95 | 37-163 | 13 | 30 | | | | |
| t-Butyl alcohol | 117 | 115 | 47-153 | 0 | 30 | | | | |
| n-Butylbenzene | 117 | 101 | 30-146 | 12 | 30 | | | | |
| sec-Butylbenzene | 131 | 102 | 33-157 | 22 | 30 | | | | |
| tert-Butylbenzene | 125 | 108 | 41-152 | 13 | 30 | | | | |
| Carbon Disulfide | 118 | 94 | 48-146 | 20 | 30 | | | | |
| Carbon Tetrachloride | 152 | 123 | 51-165 | 18 | 30 | | | | |
| Chlorobenzene | 130 | 102 | 49-135 | 22 | 30 | | | | |
| Chloroethane | 113 | 117 | 39-152 | 6 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 76 | 92 | 32-139 | 21 | 30 | | | | |
| Chloroform | 144* | 119 | 61-142 | 17 | 30 | | | | |
| 1-Chlorohexane | 104 | 98 | 70-130 | 4 | 30 | | | | |
| Chloromethane | 98 | 99 | 36-143 | 4 | 30 | | | | |
| 2-Chlorotoluene | 123 | 104 | 42-146 | 14 | 30 | | | | |
| 4-Chlorotoluene | 122 | 104 | 39-145 | 13 | 30 | | | | |
| Chlorotrifluoroethene | 72 | 76 | 70-130 | 3 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 98 | 90 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 129* | 105 | 51-128 | 18 | 30 | | | | |
| 1,2-Dibromoethane | 122 | 99 | 54-129 | 19 | 30 | | | | |
| Dibromomethane | 124 | 103 | 57-130 | 17 | 30 | | | | |
| 1,2-Dichlorobenzene | 123 | 108 | 36-133 | 11 | 30 | | | | |
| 1,3-Dichlorobenzene | 128 | 104 | 34-134 | 19 | 30 | | | | |
| 1,4-Dichlorobenzene | 122 | 103 | 35-136 | 14 | 30 | | | | |
| Dichlorodifluoromethane | 121 | 122 | 26-151 | 3 | 30 | | | | |
| 1,1-Dichloroethane | 127 | 103 | 63-142 | 18 | 30 | | | | |
| 1,2-Dichloroethane | 149* | 120 | 54-143 | 19 | 30 | | | | |
| 1,1-Dichloroethene | 142 | 117 | 61-149 | 17 | 30 | | | | |
| cis-1,2-Dichloroethene | 128 | 105 | 67-135 | 18 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475119
Reported: 06/09/14 at 12:59 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 140 | 113 | 64-144 | 19 | 30 | | | | |
| 1,2-Dichloropropane | 116 | 97 | 54-144 | 16 | 30 | | | | |
| 1,3-Dichloropropane | 114 | 92 | 51-140 | 18 | 30 | | | | |
| 2,2-Dichloropropane | 129 | 104 | 53-147 | 19 | 30 | | | | |
| 1,1-Dichloropropene | 134 | 110 | 54-145 | 17 | 30 | | | | |
| cis-1,3-Dichloropropene | 117 | 93 | 45-137 | 20 | 30 | | | | |
| trans-1,3-Dichloropropene | 113 | 92 | 51-134 | 18 | 30 | | | | |
| Ethyl t-butyl ether | 110 | 94 | 58-124 | 13 | 30 | | | | |
| Ethylbenzene | 131 | 104 | 44-141 | 21 | 30 | | | | |
| Freon 113 | 142 | 115 | 56-156 | 18 | 30 | | | | |
| Freon 133a | 101 | 107 | 61-131 | 4 | 30 | | | | |
| Hexachlorobutadiene | 139 | 115 | 10-155 | 17 | 30 | | | | |
| 2-Hexanone | 96 | 81 | 32-160 | 15 | 30 | | | | |
| di-Isopropyl ether | 112 | 94 | 59-133 | 15 | 30 | | | | |
| Isopropylbenzene | 136 | 110 | 38-144 | 19 | 30 | | | | |
| p-Isopropyltoluene | 117 | 100 | 29-152 | 13 | 30 | | | | |
| Methyl Iodide | 148* | 120 | 52-139 | 18 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 121 | 101 | 55-129 | 15 | 30 | | | | |
| 4-Methyl-2-pentanone | 100 | 83 | 46-139 | 16 | 30 | | | | |
| Methylene Chloride | 188* | 238* | 60-149 | 26 | 30 | | | | |
| n-Propylbenzene | 128 | 109 | 39-157 | 14 | 30 | | | | |
| Styrene | 128 | 102 | 35-134 | 20 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 134 | 106 | 55-139 | 21 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 104 | 89 | 29-182 | 13 | 30 | | | | |
| Tetrachloroethene | 151* | 122 | 42-149 | 19 | 30 | | | | |
| Toluene | 120 | 100 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 111 | 96 | 10-140 | 12 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 114 | 98 | 10-136 | 12 | 30 | | | | |
| 1,1,1-Trichloroethane | 131 | 106 | 52-146 | 19 | 30 | | | | |
| 1,1,2-Trichloroethane | 123 | 99 | 58-152 | 19 | 30 | | | | |
| Trichloroethene | 132 | 109 | 53-144 | 17 | 30 | | | | |
| Trichlorofluoromethane | 127 | 127 | 47-163 | 2 | 30 | | | | |
| 1,2,3-Trichloropropane | 120 | 98 | 36-180 | 18 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 127 | 108 | 37-149 | 14 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 126 | 110 | 38-150 | 11 | 30 | | | | |
| Vinyl Acetate | 30 | 23 | 21-139 | 25 | 30 | | | | |
| Vinyl Chloride | 104 | 108 | 50-154 | 6 | 30 | | | | |
| m+p-Xylene | 129 | 104 | 44-137 | 19 | 30 | | | | |
| o-Xylene | 124 | 99 | 42-137 | 20 | 30 | | | | |
| Batch number: 14141162401B | Sample number(s): 7467785-7467786 | | | | | BKG: P466734 | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.8 | 5.2 | 8 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475119
Reported: 06/09/14 at 12:59 PM

## Surrogate Quality Control

Batch number: B141431AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7467785 | 112 | 104 | 95 | 95 |
| 7467786 | 112 | 103 | 98 | 97 |
| Blank | 110 | 100 | 99 | 97 |
| LCS | 108 | 106 | 102 | 105 |
| MS | 110 | 103 | 101 | 104 |
| MSD | 111 | 105 | 97 | 95 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141392AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7467784 | 99 | 100 | 99 | 96 |
| Blank | 99 | 100 | 99 | 95 |
| LCS | 99 | 102 | 100 | 100 |
| LCSD | 98 | 102 | 101 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/16/2014

CarrierName: FedEx

AirbillNo: 770009222264

A-13013
G-1475119
S-7467784

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140516-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-051614 | 5/16/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-504-SA8-SB-2.0-2.5 | 5/16/14 10:00 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-504-SA8-SB-2.0-2.5 | 5/16/14 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-519-SA8-SB-7.5-8.0 | 5/16/14 11:40 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | HOLD AFTER EXTRACTION. |
| SVL-519-SA8-SB-7.5-8.0 | 5/16/14 11:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture. |

Special Instructions:

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stephanie Lypell | 05/16/14 | 1300 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/17/14 | 0915 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14806

Group Number(s): 1475119

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/17/2014 9:15 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 09:34 on 05/17/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

## Nicole Maljovec

**From:** Mysel, Stefanie <MyselSJ@cdmsmith.com>
**Sent:** Tuesday, May 20, 2014 7:03 PM
**To:** Nicole Maljovec
**Cc:** Burgesser, Todd; Hartman, Pamela; Zakowski, Cherie; Mysel, Stefanie
**Subject:** SSFL samples on hold

Nicole,

We just found out that we aren't holding any samples so all the samples we requested to be put on hold last week and this week we need you to analyze. Thanks.

Stefanie J. Mysel
Geologist

CDM Smith
111 Academy Way
Suite 150
Irvine, CA 92617
Direct: 949-930-9877
Main: 949-752-5452
Cell: 949-579-0634
Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 28, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/15/2014
Group Number: 1475281
SDG: PH182
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-521-SA5B-SB-3.0-3.5 Soil | 7468635 |
| TB2-051414 Water | 7468636 |
| SVL-543-SA5B-SB-2.0-2.5 Soil | 7468637 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SVL-521-SA5B-SB-3.0-3.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7468635**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:20 by RE

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH182-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.95 |
| 10237 | Acrolein | 107-02-8 | 99 | U | 99 | 20 | 0.95 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.95 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.95 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.95 |
| 10237 | t-Butyl alcohol | 75-65-0 | 49 | U | 49 | 20 | 0.95 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.95 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.95 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-521-SA5B-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7468635**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:20 by RE

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH182-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.95 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.95 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.95 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.95 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.95 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.95 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 21:01 | Christopher G Torres | 0.95 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034554 | 05/20/2014 08:31 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-521-SA5B-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7468635**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 09:20 by RE

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

521-- SDG#: PH182-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034554 | 05/20/2014 08:31 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034554 | 05/15/2014 19:40 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401B | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-051414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7468636**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 08:00

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-T-B2 SDG#: PH182-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-051414 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7468636**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 08:00

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

-T-B2 SDG#: PH182-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 11:43 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 11:43 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-543-SA5B-SB-2.0-2.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7468637**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:50 by RE

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

543-- SDG#: PH182-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 23 | U | 23 | 8 | 1.04 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 23 | 1.04 |
| 10237 | Acrylonitrile | 107-13-1 | 23 | U | 23 | 5 | 1.04 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 1.04 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 5 | 1.04 |
| 10237 | t-Butyl alcohol | 75-65-0 | 56 | U | 56 | 23 | 1.04 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 1.04 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 1.04 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 1.04 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 1.04 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.04 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-543-SA5B-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7468637**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:50 by RE

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

543-- SDG#: PH182-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 3 | 1.04 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 1.04 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.04 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 1.04 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 1.04 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 21:23 | Christopher G Torres | 1.04 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034554 | 05/20/2014 08:31 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-543-SA5B-SB-2.0-2.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7468637**
**LL Group # 1475281**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/14/2014 13:50 by RE

Submitted: 05/15/2014 10:00
Reported: 05/28/2014 13:05

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

543-- SDG#: PH182-03*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034554 | 05/20/2014 08:31 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034554 | 05/15/2014 19:42 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14141162401B | 05/21/2014 19:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475281
Reported: 05/28/14 at 01:05 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7468635,7468637 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 98 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 79 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 87 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 92 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 97 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 105 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 121 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 107 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 109 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 94 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 118 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 90 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 113 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 102 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 83 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 113 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 93 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 89 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 64 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 90 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 104 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 101 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 120 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 111 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 92 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 97 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 95 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475281
Reported: 05/28/14 at 01:05 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 91 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 90 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 97 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 98 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 118 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 93 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 92 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 116 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 102 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 85 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 105 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 106 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 91 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 96 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 100 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 105 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 105 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 71 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Batch number: Y141471AA | Sample number(s): 7468636 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475281
Reported: 05/28/14 at 01:05 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475281
Reported: 05/28/14 at 01:05 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14141162401B | Sample number(s): 7468635,7468637 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7468635,7468637 UNSPK: P466839 | | | | | | | | |
| Acetone | 129 | 113 | 31-195 | 11 | 30 | | | | |
| Acrolein | 67 | 81 | 10-165 | 21 | 30 | | | | |
| Acrylonitrile | 96 | 82 | 48-139 | 13 | 30 | | | | |
| t-Amyl methyl ether | 111 | 94 | 50-132 | 14 | 30 | | | | |
| Benzene | 123 | 101 | 55-143 | 17 | 30 | | | | |
| Bromobenzene | 130 | 109 | 43-139 | 15 | 30 | | | | |
| Bromochloromethane | 127 | 120 | 60-137 | 3 | 30 | | | | |
| Bromodichloromethane | 126 | 104 | 53-136 | 17 | 30 | | | | |
| Bromoform | 131 | 105 | 50-144 | 20 | 30 | | | | |
| Bromomethane | 120 | 124 | 42-168 | 6 | 30 | | | | |
| 2-Butanone | 110 | 95 | 37-163 | 13 | 30 | | | | |
| t-Butyl alcohol | 117 | 115 | 47-153 | 0 | 30 | | | | |
| n-Butylbenzene | 117 | 101 | 30-146 | 12 | 30 | | | | |
| sec-Butylbenzene | 131 | 102 | 33-157 | 22 | 30 | | | | |
| tert-Butylbenzene | 125 | 108 | 41-152 | 13 | 30 | | | | |
| Carbon Disulfide | 118 | 94 | 48-146 | 20 | 30 | | | | |
| Carbon Tetrachloride | 152 | 123 | 51-165 | 18 | 30 | | | | |
| Chlorobenzene | 130 | 102 | 49-135 | 22 | 30 | | | | |
| Chloroethane | 113 | 117 | 39-152 | 6 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 76 | 92 | 32-139 | 21 | 30 | | | | |
| Chloroform | 144* | 119 | 61-142 | 17 | 30 | | | | |
| 1-Chlorohexane | 104 | 98 | 70-130 | 4 | 30 | | | | |
| Chloromethane | 98 | 99 | 36-143 | 4 | 30 | | | | |
| 2-Chlorotoluene | 123 | 104 | 42-146 | 14 | 30 | | | | |
| 4-Chlorotoluene | 122 | 104 | 39-145 | 13 | 30 | | | | |
| Chlorotrifluoroethene | 72 | 76 | 70-130 | 3 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 98 | 90 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 129* | 105 | 51-128 | 18 | 30 | | | | |
| 1,2-Dibromoethane | 122 | 99 | 54-129 | 19 | 30 | | | | |
| Dibromomethane | 124 | 103 | 57-130 | 17 | 30 | | | | |
| 1,2-Dichlorobenzene | 123 | 108 | 36-133 | 11 | 30 | | | | |
| 1,3-Dichlorobenzene | 128 | 104 | 34-134 | 19 | 30 | | | | |
| 1,4-Dichlorobenzene | 122 | 103 | 35-136 | 14 | 30 | | | | |
| Dichlorodifluoromethane | 121 | 122 | 26-151 | 3 | 30 | | | | |
| 1,1-Dichloroethane | 127 | 103 | 63-142 | 18 | 30 | | | | |
| 1,2-Dichloroethane | 149* | 120 | 54-143 | 19 | 30 | | | | |
| 1,1-Dichloroethene | 142 | 117 | 61-149 | 17 | 30 | | | | |
| cis-1,2-Dichloroethene | 128 | 105 | 67-135 | 18 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475281
Reported: 05/28/14 at 01:05 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 140 | 113 | 64-144 | 19 | 30 | | | | |
| 1,2-Dichloropropane | 116 | 97 | 54-144 | 16 | 30 | | | | |
| 1,3-Dichloropropane | 114 | 92 | 51-140 | 18 | 30 | | | | |
| 2,2-Dichloropropane | 129 | 104 | 53-147 | 19 | 30 | | | | |
| 1,1-Dichloropropene | 134 | 110 | 54-145 | 17 | 30 | | | | |
| cis-1,3-Dichloropropene | 117 | 93 | 45-137 | 20 | 30 | | | | |
| trans-1,3-Dichloropropene | 113 | 92 | 51-134 | 18 | 30 | | | | |
| Ethyl t-butyl ether | 110 | 94 | 58-124 | 13 | 30 | | | | |
| Ethylbenzene | 131 | 104 | 44-141 | 21 | 30 | | | | |
| Freon 113 | 142 | 115 | 56-156 | 18 | 30 | | | | |
| Freon 133a | 101 | 107 | 61-131 | 4 | 30 | | | | |
| Hexachlorobutadiene | 139 | 115 | 10-155 | 17 | 30 | | | | |
| 2-Hexanone | 96 | 81 | 32-160 | 15 | 30 | | | | |
| di-Isopropyl ether | 112 | 94 | 59-133 | 15 | 30 | | | | |
| Isopropylbenzene | 136 | 110 | 38-144 | 19 | 30 | | | | |
| p-Isopropyltoluene | 117 | 100 | 29-152 | 13 | 30 | | | | |
| Methyl Iodide | 148* | 120 | 52-139 | 18 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 121 | 101 | 55-129 | 15 | 30 | | | | |
| 4-Methyl-2-pentanone | 100 | 83 | 46-139 | 16 | 30 | | | | |
| Methylene Chloride | 188* | 238* | 60-149 | 26 | 30 | | | | |
| n-Propylbenzene | 128 | 109 | 39-157 | 14 | 30 | | | | |
| Styrene | 128 | 102 | 35-134 | 20 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 134 | 106 | 55-139 | 21 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 104 | 89 | 29-182 | 13 | 30 | | | | |
| Tetrachloroethene | 151* | 122 | 42-149 | 19 | 30 | | | | |
| Toluene | 120 | 100 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 111 | 96 | 10-140 | 12 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 114 | 98 | 10-136 | 12 | 30 | | | | |
| 1,1,1-Trichloroethane | 131 | 106 | 52-146 | 19 | 30 | | | | |
| 1,1,2-Trichloroethane | 123 | 99 | 58-152 | 19 | 30 | | | | |
| Trichloroethene | 132 | 109 | 53-144 | 17 | 30 | | | | |
| Trichlorofluoromethane | 127 | 127 | 47-163 | 2 | 30 | | | | |
| 1,2,3-Trichloropropane | 120 | 98 | 36-180 | 18 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 127 | 108 | 37-149 | 14 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 126 | 110 | 38-150 | 11 | 30 | | | | |
| Vinyl Acetate | 30 | 23 | 21-139 | 25 | 30 | | | | |
| Vinyl Chloride | 104 | 108 | 50-154 | 6 | 30 | | | | |
| m+p-Xylene | 129 | 104 | 44-137 | 19 | 30 | | | | |
| o-Xylene | 124 | 99 | 42-137 | 20 | 30 | | | | |
| Batch number: 14141162401B | Sample number(s): 7468635,7468637 | | | | | BKG: P466734 | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.8 | 5.2 | 8 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475281
Reported: 05/28/14 at 01:05 PM

## Surrogate Quality Control

Batch number: B141431AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7468635 | 111 | 104 | 98 | 95 |
| 7468637 | 112 | 99 | 97 | 98 |
| Blank | 110 | 100 | 99 | 97 |
| LCS | 108 | 106 | 102 | 105 |
| MS | 110 | 103 | 101 | 104 |
| MSD | 111 | 105 | 97 | 95 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7468636 | 99 | 101 | 100 | 96 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Cp# ~~1474671~~ 1475281 Sample# ~~7465088-101~~ 7468635-37

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/14/2014

CarrierName: FedEx

AirbillNo: 798863489721

amc (3) 5/19/14

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140514-03

Cooler #: 2

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-EFH 8015 | TPH-GRO 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-521-SA5B-SB-3.0-3.5 | 5/14/14 09:20 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-521-SA5B-SB-3.0-3.5 | 5/14/14 09:20 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |
| TB2-051414 | 5/14/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-543-SA5B-SB-2.0-2.5 | 5/14/14 13:50 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-543-SA5B-SB-2.0-2.5 | 5/14/14 13:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steph Mupelos | 5/14/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/15/14 | 1000 |

Soil Vapor

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14574

Group Number(s): ~~1774671~~ 1475281

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/15/2014 10:00 |
| Number of Packages: | 2 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 12:12 on 05/15/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 4.1 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/20/2014
Group Number: 1475580
SDG: PH183
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-517-SA8-SB-5.0-6.0 Grab Soil | 7470160 |
| SVL-517-SA8-SB-10.0-11.0 Grab Soil | 7470161 |
| SVL-517-SA8-SB-15.5-16.5 Grab Soil | 7470162 |
| SVL-524-SA8-SB-4.5-5.5 Grab Soil | 7470163 |
| SVL-528-SA8-SB-5.0-6.0 Grab Soil | 7470164 |
| SVL-528-SA8-SB-11.0-12.0 Grab Soil | 7470165 |
| TB1-051914 Water | 7470166 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SVL-517-SA8-SB-5.0-6.0 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470160**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:00 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51750 SDG#: PH183-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.93 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.93 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.93 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.93 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.93 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.93 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.93 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-517-SA8-SB-5.0-6.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470160**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:00 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51750 SDG#: PH183-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.93 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.93 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.93 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.93 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.93 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 11.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 21:45 | Christopher G Torres | 0.93 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034559 | 05/20/2014 20:14 | Lois E Hiltz | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-517-SA8-SB-5.0-6.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470160**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:00 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51750 SDG#: PH183-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034559 | 05/20/2014 20:14 | Lois E Hiltz | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034559 | 05/20/2014 19:45 | Lois E Hiltz | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-517-SA8-SB-10.0-11.0 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470161**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:05 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51710 SDG#: PH183-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 8 | 0.89 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.89 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.89 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.89 |
| 10237 | t-Butyl alcohol | 75-65-0 | 54 | U | 54 | 21 | 0.89 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.89 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.89 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-517-SA8-SB-10.0-11.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470161**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:05 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51710 SDG#: PH183-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.89 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.89 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.89 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.89 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.89 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 17.5 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 22:07 | Christopher G Torres | 0.89 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034559 | 05/20/2014 20:14 | Lois E Hiltz | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-517-SA8-SB-10.0-11.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470161**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:05 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51710 SDG#: PH183-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034559 | 05/20/2014 20:14 | Lois E Hiltz | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034559 | 05/20/2014 19:48 | Lois E Hiltz | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-517-SA8-SB-15.5-16.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470162**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51715 SDG#: PH183-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.93 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.93 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.93 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.93 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.93 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.93 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.93 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-517-SA8-SB-15.5-16.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470162**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51715 SDG#: PH183-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.93 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.93 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.93 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.93 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.93 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 11.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 22:29 | Christopher G Torres | 0.93 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034559 | 05/20/2014 20:14 | Lois E Hiltz | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-517-SA8-SB-15.5-16.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470162**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51715 SDG#: PH183-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034559 | 05/20/2014 20:14 | Lois E Hiltz | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034559 | 05/20/2014 19:51 | Lois E Hiltz | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-524-SA8-SB-4.5-5.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470163**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 12:20 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52445 SDG#: PH183-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 7 | 0.83 |
| 10237 | Acrolein | 107-02-8 | 94 | U | 94 | 19 | 0.83 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.83 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.83 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.83 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.83 |
| 10237 | t-Butyl alcohol | 75-65-0 | 47 | U | 47 | 19 | 0.83 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.83 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.83 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.83 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.83 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.83 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.83 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.83 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.83 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.83 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.83 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-524-SA8-SB-4.5-5.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470163**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 12:20 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52445 SDG#: PH183-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.83 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.83 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.83 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.83 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.83 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.83 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.83 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.83 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 22:50 | Christopher G Torres | 0.83 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034559 | 05/20/2014 20:15 | Lois E Hiltz | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-524-SA8-SB-4.5-5.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470163**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 12:20 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52445 SDG#: PH183-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034559 | 05/20/2014 20:15 | Lois E Hiltz | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034559 | 05/20/2014 19:54 | Lois E Hiltz | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-528-SA8-SB-5.0-6.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470164**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 14:46 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52850 SDG#: PH183-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 24 | U | 24 | 8 | 1.07 |
| 10237 | Acrolein | 107-02-8 | 120 | U | 120 | 24 | 1.07 |
| 10237 | Acrylonitrile | 107-13-1 | 24 | U | 24 | 5 | 1.07 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 1.07 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Butanone | 78-93-3 | 12 | U | 12 | 5 | 1.07 |
| 10237 | t-Butyl alcohol | 75-65-0 | 61 | U | 61 | 24 | 1.07 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 12 | U | 12 | 2 | 1.07 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Hexanone | 591-78-6 | 12 | U | 12 | 4 | 1.07 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-528-SA8-SB-5.0-6.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470164**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 14:46 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52850 SDG#: PH183-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 4 | 1.07 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 1.07 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 12 | U | 12 | 4 | 1.07 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 1.07 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Vinyl Acetate | 108-05-4 | 12 | U | 12 | 2 | 1.07 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 1.07 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 23:12 | Christopher G Torres | 1.07 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034559 | 05/20/2014 20:15 | Lois E Hiltz | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-528-SA8-SB-5.0-6.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470164**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 14:46 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52850 SDG#: PH183-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034559 | 05/20/2014 20:15 | Lois E Hiltz | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034559 | 05/20/2014 19:56 | Lois E Hiltz | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-528-SA8-SB-11.0-12.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470165**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 14:50 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52811 SDG#: PH183-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 25 | U | 25 | 9 | 1.04 |
| 10237 | Acrolein | 107-02-8 | 120 | U | 120 | 25 | 1.04 |
| 10237 | Acrylonitrile | 107-13-1 | 25 | U | 25 | 5 | 1.04 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 1.04 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Butanone | 78-93-3 | 12 | U | 12 | 5 | 1.04 |
| 10237 | t-Butyl alcohol | 75-65-0 | 62 | U | 62 | 25 | 1.04 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 12 | U | 12 | 2 | 1.04 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 1.04 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 1.04 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 1.04 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 1.04 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 2-Hexanone | 591-78-6 | 12 | U | 12 | 4 | 1.04 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-528-SA8-SB-11.0-12.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470165**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 14:50 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52811 SDG#: PH183-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 4 | 1.04 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 1.04 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 12 | U | 12 | 4 | 1.04 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 1.04 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 1.04 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 1.04 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 1.04 |
| 10237 | Vinyl Acetate | 108-05-4 | 12 | U | 12 | 2 | 1.04 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 1.04 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 1.04 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 1.04 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 15.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 23:35 | Christopher G Torres | 1.04 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414034559 | 05/20/2014 20:15 | Lois E Hiltz | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-528-SA8-SB-11.0-12.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470165**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 14:50 by VV

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52811 SDG#: PH183-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414034559 | 05/20/2014 20:15 | Lois E Hiltz | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414034559 | 05/20/2014 19:59 | Lois E Hiltz | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB1-051914 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7470166**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 08:00

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

528TB SDG#: PH183-07TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB1-051914 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7470166**
**LL Group # 1475580**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 08:00

Submitted: 05/20/2014 09:45
Reported: 06/09/2014 13:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

528TB SDG#: PH183-07TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 12:04 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 12:04 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475580
Reported: 06/09/14 at 01:04 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7470160-7470165 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 98 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 79 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 87 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 92 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 97 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 105 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 121 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 107 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 109 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 94 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 118 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 90 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 113 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 102 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 83 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 113 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 93 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 89 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 64 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 90 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 104 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 101 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 120 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 111 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 92 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 97 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 95 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475580
Reported: 06/09/14 at 01:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 91 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 90 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 97 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 98 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 118 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 93 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 92 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 116 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 102 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 85 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 105 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 106 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 91 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 96 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 100 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 105 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 105 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 71 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Batch number: Y141471AA | Sample number(s): 7470166 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 | U | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475580
Reported: 06/09/14 at 01:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475580
Reported: 06/09/14 at 01:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14142162401A | Sample number(s): 7470160-7470165 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7470160-7470165 UNSPK: P466839 | | | | | | | | |
| Acetone | 129 | 113 | 31-195 | 11 | 30 | | | | |
| Acrolein | 67 | 81 | 10-165 | 21 | 30 | | | | |
| Acrylonitrile | 96 | 82 | 48-139 | 13 | 30 | | | | |
| t-Amyl methyl ether | 111 | 94 | 50-132 | 14 | 30 | | | | |
| Benzene | 123 | 101 | 55-143 | 17 | 30 | | | | |
| Bromobenzene | 130 | 109 | 43-139 | 15 | 30 | | | | |
| Bromochloromethane | 127 | 120 | 60-137 | 3 | 30 | | | | |
| Bromodichloromethane | 126 | 104 | 53-136 | 17 | 30 | | | | |
| Bromoform | 131 | 105 | 50-144 | 20 | 30 | | | | |
| Bromomethane | 120 | 124 | 42-168 | 6 | 30 | | | | |
| 2-Butanone | 110 | 95 | 37-163 | 13 | 30 | | | | |
| t-Butyl alcohol | 117 | 115 | 47-153 | 0 | 30 | | | | |
| n-Butylbenzene | 117 | 101 | 30-146 | 12 | 30 | | | | |
| sec-Butylbenzene | 131 | 102 | 33-157 | 22 | 30 | | | | |
| tert-Butylbenzene | 125 | 108 | 41-152 | 13 | 30 | | | | |
| Carbon Disulfide | 118 | 94 | 48-146 | 20 | 30 | | | | |
| Carbon Tetrachloride | 152 | 123 | 51-165 | 18 | 30 | | | | |
| Chlorobenzene | 130 | 102 | 49-135 | 22 | 30 | | | | |
| Chloroethane | 113 | 117 | 39-152 | 6 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 76 | 92 | 32-139 | 21 | 30 | | | | |
| Chloroform | 144* | 119 | 61-142 | 17 | 30 | | | | |
| 1-Chlorohexane | 104 | 98 | 70-130 | 4 | 30 | | | | |
| Chloromethane | 98 | 99 | 36-143 | 4 | 30 | | | | |
| 2-Chlorotoluene | 123 | 104 | 42-146 | 14 | 30 | | | | |
| 4-Chlorotoluene | 122 | 104 | 39-145 | 13 | 30 | | | | |
| Chlorotrifluoroethene | 72 | 76 | 70-130 | 3 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 98 | 90 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 129* | 105 | 51-128 | 18 | 30 | | | | |
| 1,2-Dibromoethane | 122 | 99 | 54-129 | 19 | 30 | | | | |
| Dibromomethane | 124 | 103 | 57-130 | 17 | 30 | | | | |
| 1,2-Dichlorobenzene | 123 | 108 | 36-133 | 11 | 30 | | | | |
| 1,3-Dichlorobenzene | 128 | 104 | 34-134 | 19 | 30 | | | | |
| 1,4-Dichlorobenzene | 122 | 103 | 35-136 | 14 | 30 | | | | |
| Dichlorodifluoromethane | 121 | 122 | 26-151 | 3 | 30 | | | | |
| 1,1-Dichloroethane | 127 | 103 | 63-142 | 18 | 30 | | | | |
| 1,2-Dichloroethane | 149* | 120 | 54-143 | 19 | 30 | | | | |
| 1,1-Dichloroethene | 142 | 117 | 61-149 | 17 | 30 | | | | |
| cis-1,2-Dichloroethene | 128 | 105 | 67-135 | 18 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475580
Reported: 06/09/14 at 01:04 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 140 | 113 | 64-144 | 19 | 30 | | | | |
| 1,2-Dichloropropane | 116 | 97 | 54-144 | 16 | 30 | | | | |
| 1,3-Dichloropropane | 114 | 92 | 51-140 | 18 | 30 | | | | |
| 2,2-Dichloropropane | 129 | 104 | 53-147 | 19 | 30 | | | | |
| 1,1-Dichloropropene | 134 | 110 | 54-145 | 17 | 30 | | | | |
| cis-1,3-Dichloropropene | 117 | 93 | 45-137 | 20 | 30 | | | | |
| trans-1,3-Dichloropropene | 113 | 92 | 51-134 | 18 | 30 | | | | |
| Ethyl t-butyl ether | 110 | 94 | 58-124 | 13 | 30 | | | | |
| Ethylbenzene | 131 | 104 | 44-141 | 21 | 30 | | | | |
| Freon 113 | 142 | 115 | 56-156 | 18 | 30 | | | | |
| Freon 133a | 101 | 107 | 61-131 | 4 | 30 | | | | |
| Hexachlorobutadiene | 139 | 115 | 10-155 | 17 | 30 | | | | |
| 2-Hexanone | 96 | 81 | 32-160 | 15 | 30 | | | | |
| di-Isopropyl ether | 112 | 94 | 59-133 | 15 | 30 | | | | |
| Isopropylbenzene | 136 | 110 | 38-144 | 19 | 30 | | | | |
| p-Isopropyltoluene | 117 | 100 | 29-152 | 13 | 30 | | | | |
| Methyl Iodide | 148* | 120 | 52-139 | 18 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 121 | 101 | 55-129 | 15 | 30 | | | | |
| 4-Methyl-2-pentanone | 100 | 83 | 46-139 | 16 | 30 | | | | |
| Methylene Chloride | 188* | 238* | 60-149 | 26 | 30 | | | | |
| n-Propylbenzene | 128 | 109 | 39-157 | 14 | 30 | | | | |
| Styrene | 128 | 102 | 35-134 | 20 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 134 | 106 | 55-139 | 21 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 104 | 89 | 29-182 | 13 | 30 | | | | |
| Tetrachloroethene | 151* | 122 | 42-149 | 19 | 30 | | | | |
| Toluene | 120 | 100 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 111 | 96 | 10-140 | 12 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 114 | 98 | 10-136 | 12 | 30 | | | | |
| 1,1,1-Trichloroethane | 131 | 106 | 52-146 | 19 | 30 | | | | |
| 1,1,2-Trichloroethane | 123 | 99 | 58-152 | 19 | 30 | | | | |
| Trichloroethene | 132 | 109 | 53-144 | 17 | 30 | | | | |
| Trichlorofluoromethane | 127 | 127 | 47-163 | 2 | 30 | | | | |
| 1,2,3-Trichloropropane | 120 | 98 | 36-180 | 18 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 127 | 108 | 37-149 | 14 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 126 | 110 | 38-150 | 11 | 30 | | | | |
| Vinyl Acetate | 30 | 23 | 21-139 | 25 | 30 | | | | |
| Vinyl Chloride | 104 | 108 | 50-154 | 6 | 30 | | | | |
| m+p-Xylene | 129 | 104 | 44-137 | 19 | 30 | | | | |
| o-Xylene | 124 | 99 | 42-137 | 20 | 30 | | | | |
| Batch number: 14142162401A | Sample number(s): 7470160-7470165 | | | | | BKG: P470316 | | | |
| 14a Moisture Content by 160.3 | | | | | | 13.5 | 12.4 | 9 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475580
Reported: 06/09/14 at 01:04 PM

## Surrogate Quality Control

Batch number: B141431AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7470160 | 115 | 109 | 96 | 97 |
| 7470161 | 111 | 102 | 97 | 97 |
| 7470162 | 111 | 99 | 98 | 96 |
| 7470163 | 115 | 105 | 93 | 97 |
| 7470164 | 114 | 105 | 93 | 94 |
| 7470165 | 114 | 100 | 94 | 92 |
| Blank | 110 | 100 | 99 | 97 |
| LCS | 108 | 106 | 102 | 105 |
| MS | 110 | 103 | 101 | 104 |
| MSD | 111 | 105 | 97 | 95 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7470166 | 100 | 99 | 99 | 95 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 13013 Group# 1475580 Sample # 7470160-66 **COC #** 213661

Please print. Instructions on reverse side correspond with circled numbers.

**For Lab Use Only**
FSC: _____
SCR#: _____

(1)
Client: CDMSmith Acct. #: _____
Project Name/#: SSFL PWSID #: _____
Project Manager: John Wondolleck P.O.#: _____
Sampler: Van Vathanasian Quote #: _____
Name of state where samples were collected: CA

(5) Analyses Requested — Preservation Codes

**Preservation Codes**
H=HCl T=Thiosulfate
N=$HNO_3$ B=NaOH
S=$H_2SO_4$ O=Other

(2) (3) (4) (6)

| Sample Identification | Date Collected | Time Collected | Grab | Composite | Soil | Water (☐ Potable ☐ NPDES) | Other | Total # of Containers | VOCs 8260 | Soil Moisture | | Put on hold after extraction | | | | | Remarks | Temperature of samples upon receipt (if requested) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-517-SA8-SB-5.0-6.0 | 05/19/14 | 09:00 | X | | X | | 4 | ~~3~~ WT 5/19/14 | X | X | | X | | | | | | |
| SVL-517-SA8-SB-10.0-11.0 | 05/19/14 | 09:05 | X | | X | | 4 | ~~3~~ WT 5/19/14 | X | X | | X | | | | | | |
| SVL-517-SA8-SB-15.5-16.5 | 05/19/14 | 09:10 | X | | X | | 4 | ~~3~~ WT 5/19/14 | X | X | | X | | | | | | |
| SVL-524-SA8-SB-4.5-5.5 | 05/19/14 | 12:20 | X | | X | | | 4 | X | X | | X | | | | | | |
| SVL-528-SA8-SB-5.0-6.0 | 05/19/14 | 14:46 | X | | X | | | 4 | X | X | | X | | | | | | |
| SVL-528-SA8-SB-11.0-12.0 | 05/19/14 | 14:50 | X | | X | | | 4 | X | X | | X | | | | | | |
| TBI-051914 | 05/19/14 | 09:00 | | | | X | | 3 | X | | | | | | | | | |

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: 10 day
Rush results requested by (please circle): Phone Fax E-mail
Phone #: _____ Fax #: _____
E-mail address: _____

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No _____

(9)

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| [signature] | 05/19/14 | 1600 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | [signature] | 5-20-14 | 945 |

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

AIRBILL #: 7700 2994 1000



Soil Vapor Sampling

1 of 2

2102.03

**Nicole Maljovec** 13013 / 1475580 / 7470160-66

**From:** Mysel, Stefanie <MyselSJ@cdmsmith.com>
**Sent:** Tuesday, May 20, 2014 7:03 PM
**To:** Nicole Maljovec
**Cc:** Burgesser, Todd; Hartman, Pamela; Zakowski, Cherie; Mysel, Stefanie
**Subject:** SSFL samples on hold

Nicole,

We just found out that we aren't holding any samples so all the samples we requested to be put on hold last week and this week we need you to analyze. Thanks.

Stefanie J. Mysel
Geologist

CDM Smith
111 Academy Way
Suite 150
Irvine, CA 92617
Direct: 949-930-9877
Main: 949-752-5452
Cell: 949-579-0634
Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14971

Group Number(s): 1475580

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/20/2014 9:45 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:19 on 05/20/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 02, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/20/2014
Group Number: 1475629
SDG: PH185
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-534-SA8-TR-0.5 Grab Soil | 7470312 |
| SL-534-SA8-TR-5.0 Grab Soil | 7470313 |
| SL-548-SA8-TR-0.5 Grab Soil | 7470314 |
| SL-848-SA8-TR-5.0 Grab Soil | 7470315 |
| SL-548-SA8-TR-5.0 Grab Soil | 7470316 |
| SL-548-SA8-TR-5.0 MS Grab Soil | 7470317 |
| SL-548-SA8-TR-5.0 MSD Grab Soil | 7470318 |
| SL-548-SA8-TR-5.0 DUP Grab Soil | 7470319 |
| SL-548-SA8-TR-10.0 Grab Soil | 7470320 |
| TB2-051914 Water | 7470321 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-534-SA8-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470312**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52405 SDG#: PH185-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.99 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.71 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.73 | J | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.6 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-534-SA8-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470312**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52405 SDG#: PH185-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,900 | | 41.3 | 7.45 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.13 | U | 4.13 | 0.765 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.16 | J | 4.13 | 0.723 | 1 |
| 06946 | Barium | 7440-39-3 | 75.1 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.589 | J | 1.03 | 0.0692 | 1 |
| 07914 | Boron | 7440-42-8 | 8.29 | J | 10.3 | 0.868 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0785 | 1 |
| 01650 | Calcium | 7440-70-2 | 35,700 | | 20.7 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.5 | | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.69 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 18.5 | | 2.07 | 0.300 | 1 |
| 01654 | Iron | 7439-89-6 | 22,100 | | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 8.90 | | 3.10 | 0.517 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.7 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,150 | | 10.3 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 305 | | 1.03 | 0.0858 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.07 | U | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.2 | | 2.07 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 339 | | 10.3 | 2.99 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,050 | | 103 | 8.62 | 1 |
| 01667 | Sodium | 7440-23-5 | 105 | | 103 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.09 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,080 | | 1.03 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 41.4 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 51.7 | | 4.13 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.00 | J | 5.17 | 0.868 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.117 | J | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0442 | J | 0.207 | 0.0269 | 2 |
| 06144 | Strontium | 7440-24-6 | 52.7 | | 0.413 | 0.0703 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.317 | | 0.207 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0171 | U | 0.0171 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.35 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.7 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470312**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52405 SDG#: PH185-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.2 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-534-SA8-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470312**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52405 SDG#: PH185-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0284 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0374 | JQ | 5.18 | 0.0238 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0451 | JQ | 5.18 | 0.0227 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.140 | JBQ | 5.18 | 0.0241 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.100 | JBQ | 5.18 | 0.0237 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.13 | JB | 5.18 | 0.0255 | 1 |
| 11031 | OCDD | 3268-87-9 | 8.27 | JB | 10.4 | 0.0189 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0798 | J | 1.04 | 0.0407 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.223 | JBQ | 5.18 | 0.0186 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.18 | U | 5.18 | 0.0203 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0484 | JB | 5.18 | 0.0267 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0986 | JBQ | 5.18 | 0.0220 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0364 | JB | 5.18 | 0.0321 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0899 | JB | 5.18 | 0.0243 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.244 | JB | 5.18 | 0.0101 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0432 | JBQ | 5.18 | 0.0229 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.424 | JBQ | 10.4 | 0.0262 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0416 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 67 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 81 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 119 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470312**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52405 SDG#: PH185-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470312**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52405 SDG#: PH185-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/26/2014 19:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 02:26 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 19:32 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 19:53 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/30/2014 06:42 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:14 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470312**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:10

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52405 SDG#: PH185-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:47 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:47 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:47 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:47 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 08:43 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14140039402A | 05/20/2014 20:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470313**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:40

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53450 SDG#: PH185-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.04 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470313**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:40

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53450 SDG#: PH185-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 5.0 | J | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,400 | | 42.4 | 7.63 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.24 | U | 4.24 | 0.784 | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.33 | J | 4.24 | 0.741 | 1 |
| 06946 | Barium | 7440-39-3 | 66.8 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.505 | J | 1.06 | 0.0709 | 1 |
| 07914 | Boron | 7440-42-8 | 6.99 | J | 10.6 | 0.890 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0805 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,600 | | 21.2 | 3.54 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.6 | | 3.18 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.58 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 11.8 | | 2.12 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 21,800 | | 42.4 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 7.98 | | 3.18 | 0.529 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.4 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,290 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 313 | | 1.06 | 0.0879 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.12 | U | 2.12 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.2 | | 2.12 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 361 | | 10.6 | 3.06 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,610 | | 106 | 8.83 | 1 |
| 01667 | Sodium | 7440-23-5 | 356 | | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.08 | J | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,110 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.1 | | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 51.2 | | 4.24 | 0.212 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.99 | J | 5.29 | 0.890 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.424 | U | 0.424 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0298 | J | 0.212 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.3 | | 0.424 | 0.0720 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.227 | | 0.212 | 0.0318 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0167 | U | 0.0167 | 0.0100 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470313**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:40

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53450 SDG#: PH185-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 8.81 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.7 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.5 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470313**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:40

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53450 SDG#: PH185-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 U | 1.04 | 0.0253 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0283 JQ | 5.18 | 0.0195 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0213 JQ | 5.18 | 0.0152 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0225 JB | 5.18 | 0.0150 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0190 JBQ | 5.18 | 0.0150 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.393 JB | 5.18 | 0.0219 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.14 JB | 10.4 | 0.0189 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 U | 1.04 | 0.0225 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0383 JB | 5.18 | 0.0101 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0197 JBQ | 5.18 | 0.0113 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0412 JBQ | 5.18 | 0.0159 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0238 JBQ | 5.18 | 0.0129 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0200 JBQ | 5.18 | 0.0160 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0478 JBQ | 5.18 | 0.0145 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.217 JB | 5.18 | 0.00813 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0561 JB | 5.18 | 0.0207 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.781 JBQ | 10.4 | 0.0285 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0113 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 66 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 70 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 118 | 28 - 143 |
| 13C12-1234789-HpCDF | 53 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470313**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:40

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53450 SDG#: PH185-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470313**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:40

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53450 SDG#: PH185-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/26/2014 19:38 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/21/2014 22:40 | Marie D Beamenderfer | 24.04 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414034557 | 05/20/2014 19:26 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414034557 | 05/20/2014 19:27 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 02:44 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 19:53 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 20:15 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/30/2014 07:38 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-534-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470313**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 09:40

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53450 SDG#: PH185-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:18 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:21 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:21 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:21 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:21 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 08:45 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14140039402A | 05/20/2014 20:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-SA8-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470314**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:37

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54805 SDG#: PH185-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.61 | J | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.85 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.3 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | J | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 14 | J | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.6 | | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.83 | J | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | J | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 4.3 | | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 3.7 | | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | J | 1.8 | 0.73 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.0 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 17 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-SA8-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470314**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:37

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54805 SDG#: PH185-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 29,200 | | 44.0 | 7.92 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.40 | U | 4.40 | 0.813 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.58 | J | 4.40 | 0.769 | 1 |
| 06946 | Barium | 7440-39-3 | 141 | | 1.10 | 0.0363 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.02 | J | 1.10 | 0.0736 | 1 |
| 07914 | Boron | 7440-42-8 | 15.5 | | 11.0 | 0.923 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0835 | 1 |
| 01650 | Calcium | 7440-70-2 | 15,400 | | 22.0 | 3.67 | 1 |
| 06951 | Chromium | 7440-47-3 | 35.6 | | 3.30 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 10.7 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 21.7 | | 2.20 | 0.319 | 1 |
| 01654 | Iron | 7439-89-6 | 31,500 | | 87.9 | 7.96 | 2 |
| 06955 | Lead | 7439-92-1 | 14.9 | | 3.30 | 0.549 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.5 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,060 | | 11.0 | 1.84 | 1 |
| 06958 | Manganese | 7439-96-5 | 504 | | 1.10 | 0.0912 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.20 | U | 2.20 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 20.8 | | 2.20 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 418 | | 11.0 | 3.18 | 1 |
| 01662 | Potassium | 7440-09-7 | 5,930 | | 110 | 9.16 | 1 |
| 01667 | Sodium | 7440-23-5 | 108 | J | 110 | 18.4 | 1 |
| 06969 | Tin | 7440-31-5 | 3.13 | J | 11.0 | 0.242 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 64.4 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 74.6 | | 4.40 | 0.220 | 1 |
| 10146 | Zirconium | 7440-67-7 | 6.62 | | 5.49 | 0.923 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.178 | J | 0.440 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0623 | J | 0.220 | 0.0286 | 2 |
| 06144 | Strontium | 7440-24-6 | 47.1 | | 0.440 | 0.0747 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.351 | | 0.220 | 0.0330 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0139 | J | 0.0180 | 0.0108 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.17 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470314**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:37

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54805 SDG#: PH185-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.0 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-SA8-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470314**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:37

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54805 SDG#: PH185-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.07 | U | 1.07 | 0.0239 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0253 | JQ | 5.37 | 0.0233 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0438 | JQ | 5.37 | 0.0270 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.230 | JBQ | 5.37 | 0.0279 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.317 | JB | 5.37 | 0.0264 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.59 | JB | 5.37 | 0.0184 | 1 |
| 11031 | OCDD | 3268-87-9 | 20.7 | B | 10.7 | 0.0187 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0392 | J | 1.07 | 0.0245 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.148 | JB | 5.37 | 0.0121 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0525 | JBQ | 5.37 | 0.0129 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0505 | JBQ | 5.37 | 0.0196 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0533 | JBQ | 5.37 | 0.0157 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.272 | JB | 5.37 | 0.0183 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0448 | JBQ | 5.37 | 0.0167 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.352 | JB | 5.37 | 0.00878 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0502 | JBQ | 5.37 | 0.0206 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.941 | JB | 10.7 | 0.0242 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.103 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 89 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 124 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 50 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470314**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:37

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54805 SDG#: PH185-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470314**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:37

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54805 SDG#: PH185-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/27/2014 03:02 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 03:03 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 20:15 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 20:36 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/30/2014 08:35 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:30 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:30 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470314**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:37

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54805 SDG#: PH185-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:47 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:47 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:47 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:47 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 08:47 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14140039402A | 05/20/2014 20:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-848-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470315**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:22

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84850 SDG#: PH185-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 22.94 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 38 | U | 38 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 38 | U | 38 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 38 | U | 38 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.8 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.7 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.7 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 5.0 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.4 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.8 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-848-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470315**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:22

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84850 SDG#: PH185-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 2.9 | J | 5.7 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 15 | | 11 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.6 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 27,300 | | 43.8 | 7.89 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.38 | U | 4.38 | 0.809 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.99 | J | 4.38 | 0.766 | 1 |
| 06946 | Barium | 7440-39-3 | 112 | | 1.09 | 0.0361 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.873 | J | 1.09 | 0.0733 | 1 |
| 07914 | Boron | 7440-42-8 | 12.9 | | 10.9 | 0.919 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.09 | U | 1.09 | 0.0831 | 1 |
| 01650 | Calcium | 7440-70-2 | 46,300 | | 21.9 | 3.65 | 1 |
| 06951 | Chromium | 7440-47-3 | 33.0 | | 3.28 | 0.175 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.31 | | 1.09 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 17.6 | | 2.19 | 0.317 | 1 |
| 01654 | Iron | 7439-89-6 | 29,300 | | 87.5 | 7.92 | 2 |
| 06955 | Lead | 7439-92-1 | 11.3 | | 3.28 | 0.547 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.5 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,420 | | 10.9 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 260 | | 1.09 | 0.0908 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.19 | U | 2.19 | 0.186 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.5 | | 2.19 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 239 | | 10.9 | 3.16 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,600 | | 109 | 9.12 | 1 |
| 01667 | Sodium | 7440-23-5 | 154 | | 109 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.31 | J | 10.9 | 0.241 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,020 | | 1.09 | 0.186 | 1 |
| 06971 | Vanadium | 7440-62-2 | 57.9 | | 1.09 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 58.8 | | 4.38 | 0.219 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.60 | | 5.47 | 0.919 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.438 | U | 0.438 | 0.109 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0509 | J | 0.219 | 0.0284 | 2 |
| 06144 | Strontium | 7440-24-6 | 53.9 | | 0.438 | 0.0744 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.322 | | 0.219 | 0.0328 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0125 | J | 0.0187 | 0.0112 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-848-SA8-TR-5.0 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470315**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:22

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84850 SDG#: PH185-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 8.11 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.7 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.1 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-848-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470315**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:22

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84850 SDG#: PH185-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.12 | U | 1.12 | 0.0364 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.59 | U | 5.59 | 0.0263 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0245 | JQ | 5.59 | 0.0194 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.59 | U | 5.59 | 0.0198 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.59 | U | 5.59 | 0.0196 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.0786 | JBQ | 5.59 | 0.0185 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.359 | JB | 11.2 | 0.0229 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.12 | U | 1.12 | 0.0262 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0148 | JB | 5.59 | 0.0130 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0260 | JBQ | 5.59 | 0.0144 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0172 | JB | 5.59 | 0.0119 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.59 | U | 5.59 | 0.00909 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0438 | JBQ | 5.59 | 0.0139 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0235 | JB | 5.59 | 0.0104 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0246 | JBQ | 5.59 | 0.00655 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0695 | JBQ | 5.59 | 0.0178 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.197 | JBQ | 11.2 | 0.0381 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00462 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 80 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 87 | 24 - 185 |
| 13C12-23478-PeCDF | 74 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 64 | 29 - 147 |
| 13C12-1234678-HpCDF | 122 | 28 - 143 |
| 13C12-1234789-HpCDF | 53 | 26 - 138 |
| 13C12-OCDF | 44 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-848-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470315**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:22

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84850 SDG#: PH185-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-848-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470315**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:22

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84850 SDG#: PH185-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/27/2014 03:34 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/21/2014 23:18 | Marie D Beamenderfer | 22.94 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414034557 | 05/20/2014 19:29 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414034557 | 05/20/2014 19:29 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 04:35 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 20:36 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 20:58 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/30/2014 09:32 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:34 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-848-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470315**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:22

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

84850 SDG#: PH185-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:33 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:50 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:50 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:50 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:50 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 08:49 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14140039402A | 05/20/2014 20:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470316**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 20 | U | 20 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.77 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.77 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 22.81 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 38 | U | 38 | 12 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 20 | U | 20 | 5.9 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 20 | U | 20 | 4.7 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 20 | U | 20 | 4.7 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 20 | U | 20 | 5.1 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 20 | U | 20 | 4.5 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 20 | U | 20 | 3.8 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470316**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | U | 12 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 12 | U | 12 | 4.6 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.8 | U | 5.8 | 2.3 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 29,100 | | 45.3 | 8.17 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.53 | U | 4.53 | 0.839 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.92 | J | 4.53 | 0.793 | 1 |
| 06946 | Barium | 7440-39-3 | 123 | | 1.13 | 0.0374 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.00 | J | 1.13 | 0.0759 | 1 |
| 07914 | Boron | 7440-42-8 | 12.6 | | 11.3 | 0.952 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.13 | U | 1.13 | 0.0861 | 1 |
| 01650 | Calcium | 7440-70-2 | 18,000 | | 22.7 | 3.79 | 1 |
| 06951 | Chromium | 7440-47-3 | 35.4 | | 3.40 | 0.181 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.01 | | 1.13 | 0.112 | 1 |
| 06953 | Copper | 7440-50-8 | 19.1 | | 2.27 | 0.329 | 1 |
| 01654 | Iron | 7439-89-6 | 31,900 | | 90.7 | 8.21 | 2 |
| 06955 | Lead | 7439-92-1 | 13.1 | | 3.40 | 0.567 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.2 | | 4.5 | 0.39 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,090 | | 11.3 | 1.89 | 1 |
| 06958 | Manganese | 7439-96-5 | 261 | | 1.13 | 0.0941 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.27 | U | 2.27 | 0.193 | 1 |
| 06961 | Nickel | 7440-02-0 | 17.1 | | 2.27 | 0.147 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 240 | | 11.3 | 3.28 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,740 | | 113 | 9.45 | 1 |
| 01667 | Sodium | 7440-23-5 | 163 | | 113 | 18.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.34 | J | 11.3 | 0.249 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,020 | | 1.13 | 0.193 | 1 |
| 06971 | Vanadium | 7440-62-2 | 61.7 | | 1.13 | 0.147 | 1 |
| 06972 | Zinc | 7440-66-6 | 64.4 | | 4.53 | 0.227 | 1 |
| 10146 | Zirconium | 7440-67-7 | 6.04 | | 5.67 | 0.952 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.453 | U | 0.453 | 0.113 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0496 | J | 0.227 | 0.0295 | 2 |
| 06144 | Strontium | 7440-24-6 | 47.7 | | 0.453 | 0.0771 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.316 | | 0.227 | 0.0340 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0127 | J | 0.0188 | 0.0113 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-SA8-TR-5.0 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470316**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 8.19 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.8 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 13.5 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470316**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.15 | U | 1.15 | 0.0292 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0232 | JQ | 5.77 | 0.0204 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0310 | JQ | 5.77 | 0.0184 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0290 | JBQ | 5.77 | 0.0191 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.77 | U | 5.77 | 0.0190 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.111 | JB | 5.77 | 0.0201 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.434 | JB | 11.5 | 0.0219 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.15 | U | 1.15 | 0.0204 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0686 | JB | 5.77 | 0.0116 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0262 | JBQ | 5.77 | 0.0120 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.111 | JB | 5.77 | 0.0138 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0637 | JBQ | 5.77 | 0.0116 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0470 | JB | 5.77 | 0.0160 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0428 | JBQ | 5.77 | 0.0132 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.209 | JBQ | 5.77 | 0.00857 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0636 | JBQ | 5.77 | 0.0176 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.559 | JBQ | 11.5 | 0.0336 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0190 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 71 | 32 - 141 |
| 13C12-123678-HxCDD | 73 | 28 - 130 |
| 13C12-123789-HxCDD | 72 | 28 - 130 |
| 13C12-1234678-HpCDD | 68 | 23 - 140 |
| 13C12-OCDD | 62 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 66 | 21 - 178 |
| 13C12-123478-HxCDF | 66 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 60 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 52 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470316**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470316**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/26/2014 17:31 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/22/2014 00:34 | Marie D Beamenderfer | 22.81 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414034557 | 05/20/2014 19:32 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414034557 | 05/20/2014 19:33 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 04:53 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 20:58 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 21:20 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/30/2014 20:15 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:07 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470316**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:51 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:28 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:28 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:28 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:28 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 08:51 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14140039402A | 05/20/2014 20:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MS Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470317**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 40 | | 1.9 | 0.77 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 39 | | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 41 | | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 40 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 36 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 41 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 32 | | 20 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 33 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 35 | | 1.9 | 0.77 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 39 | | 21 | 6.9 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 43 | | 21 | 6.9 | 1 |
| 12969 | Chrysene | 218-01-9 | 37 | | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 37 | | 1.9 | 0.77 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 35 | | 21 | 6.9 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 36 | | 21 | 6.9 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 45 | | 21 | 6.9 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 40 | | 1.9 | 0.77 | 1 |
| 12969 | Fluorene | 86-73-7 | 40 | | 1.9 | 0.77 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 36 | | 1.9 | 0.77 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 36 | | 1.9 | 0.77 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 39 | | 1.9 | 0.77 | 1 |
| 12969 | Naphthalene | 91-20-3 | 37 | | 1.9 | 0.77 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 35 | | 1.9 | 0.77 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 44 | | 21 | 6.9 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 39 | | 1.9 | 0.77 | 1 |
| 12969 | Pyrene | 129-00-0 | 36 | | 1.9 | 0.77 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 8.4 | | 0.9 | 0.2 | 20.53 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 38 | U | 38 | 12 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 180 | | 20 | 3.8 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 20 | U | 20 | 5.9 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 20 | U | 20 | 4.7 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 20 | U | 20 | 4.7 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 20 | U | 20 | 5.1 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 200 | | 20 | 4.5 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 20 | U | 20 | 3.8 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 6.3 | | 5.8 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 9.7 | | 5.8 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MS Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470317**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 17 | | 5.8 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 20 | | 12 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | J | 5.8 | 2.3 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.2 | J | 5.8 | 2.3 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.4 | | 5.8 | 2.3 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 11 | | 5.8 | 2.3 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | J | 12 | 4.6 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.5 | J | 5.8 | 2.3 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 34,600 | | 45.3 | 8.17 | 1 |
| 06944 | Antimony | 7440-36-0 | 23.3 | | 4.53 | 0.839 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.8 | | 4.53 | 0.793 | 1 |
| 06946 | Barium | 7440-39-3 | 334 | | 1.13 | 0.0374 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.64 | | 1.13 | 0.0759 | 1 |
| 07914 | Boron | 7440-42-8 | 237 | | 11.3 | 0.952 | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.52 | | 1.13 | 0.0861 | 1 |
| 01650 | Calcium | 7440-70-2 | 68,600 | | 45.3 | 7.57 | 2 |
| 06951 | Chromium | 7440-47-3 | 58.0 | | 3.40 | 0.181 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.7 | | 1.13 | 0.112 | 1 |
| 06953 | Copper | 7440-50-8 | 48.5 | | 2.27 | 0.329 | 1 |
| 01654 | Iron | 7439-89-6 | 30,400 | | 45.3 | 4.10 | 1 |
| 06955 | Lead | 7439-92-1 | 25.3 | | 3.40 | 0.567 | 1 |
| 01656 | Lithium | 7439-93-2 | 142 | | 4.5 | 0.39 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,120 | | 11.3 | 1.89 | 1 |
| 06958 | Manganese | 7439-96-5 | 315 | | 1.13 | 0.0941 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 196 | | 2.27 | 0.193 | 1 |
| 06961 | Nickel | 7440-02-0 | 65.7 | | 2.27 | 0.147 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 358 | | 11.3 | 3.28 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,160 | | 113 | 9.45 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,290 | | 113 | 18.9 | 1 |
| 06969 | Tin | 7440-31-5 | 375 | | 11.3 | 0.249 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,530 | | 1.13 | 0.193 | 1 |
| 06971 | Vanadium | 7440-62-2 | 124 | | 1.13 | 0.147 | 1 |
| 06972 | Zinc | 7440-66-6 | 113 | | 4.53 | 0.227 | 1 |
| 10146 | Zirconium | 7440-67-7 | 115 | | 5.67 | 0.952 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.12 | | 0.453 | 0.113 | 2 |
| 06142 | Silver | 7440-22-4 | 11.4 | | 0.227 | 0.0295 | 2 |
| 06144 | Strontium | 7440-24-6 | 58.8 | | 0.453 | 0.0771 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.767 | | 0.227 | 0.0340 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.192 | | 0.0186 | 0.0112 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MS Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470317**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 13.5 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-SA8-TR-5.0 MS Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470317**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 21.7 | B | 1.12 | 0.0490 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 108 | | 5.58 | 0.0464 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 110 | | 5.58 | 0.0556 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 107 | B | 5.58 | 0.0544 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 110 | B | 5.58 | 0.0538 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 109 | B | 5.58 | 0.0494 | 1 |
| 11031 | OCDD | 3268-87-9 | 211 | B | 11.2 | 0.0431 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 22.2 | | 1.12 | 0.0426 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 107 | B | 5.58 | 0.0352 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 109 | B | 5.58 | 0.0373 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 113 | B | 5.58 | 0.0841 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 112 | B | 5.58 | 0.0712 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 109 | B | 5.58 | 0.0834 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 109 | B | 5.58 | 0.0777 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 109 | B | 5.58 | 0.0370 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 110 | B | 5.58 | 0.0703 | 1 |
| 11031 | OCDF | 39001-02-0 | 217 | B | 11.2 | 0.0546 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 75 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 88 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 107 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 56 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MS Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470317**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MS Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470317**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/26/2014 18:03 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/22/2014 13:14 | Marie D Beamenderfer | 20.53 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414034557 | 05/20/2014 19:34 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414034557 | 05/20/2014 19:34 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 05:11 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 21:20 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 21:41 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/30/2014 21:12 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:18 | Joanne M Gates | 2 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MS Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470317**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:03 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:35 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:35 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:35 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:35 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 09:01 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MSD Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470318**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 39 | | 1.9 | 0.77 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 37 | | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 39 | | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 40 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 35 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 40 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 32 | | 20 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 17 | | 1.9 | 0.77 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 34 | | 1.9 | 0.77 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 40 | | 21 | 6.9 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 42 | | 21 | 6.9 | 1 |
| 12969 | Chrysene | 218-01-9 | 36 | | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 35 | | 1.9 | 0.77 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 33 | | 21 | 6.9 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 34 | | 21 | 6.9 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 46 | | 21 | 6.9 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 38 | | 1.9 | 0.77 | 1 |
| 12969 | Fluorene | 86-73-7 | 38 | | 1.9 | 0.77 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 34 | | 1.9 | 0.77 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 35 | | 1.9 | 0.77 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 1.9 | 0.77 | 1 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 1.9 | 0.77 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 33 | | 1.9 | 0.77 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 45 | | 21 | 6.9 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 37 | | 1.9 | 0.77 | 1 |
| 12969 | Pyrene | 129-00-0 | 35 | | 1.9 | 0.77 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 9.8 | | 1.0 | 0.2 | 22.05 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 38 | U | 38 | 12 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 38 | U | 38 | 12 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 180 | | 20 | 3.8 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 20 | U | 20 | 5.9 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 20 | U | 20 | 4.7 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 20 | U | 20 | 4.7 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 20 | U | 20 | 5.1 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 200 | | 20 | 4.5 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 20 | U | 20 | 3.8 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 20 | U | 20 | 3.8 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | J | 5.8 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.6 | | 5.8 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MSD Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470318**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.8 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 12 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | J | 5.8 | 2.3 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.1 | J | 5.8 | 2.3 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.2 | | 5.8 | 2.3 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 10 | | 5.8 | 2.3 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | J | 12 | 4.6 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.7 | J | 5.8 | 2.3 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 37,700 | | 44.5 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 19.0 | | 4.45 | 0.823 | 1 |
| 06935 | Arsenic | 7440-38-2 | 18.8 | | 4.45 | 0.778 | 1 |
| 06946 | Barium | 7440-39-3 | 345 | | 1.11 | 0.0367 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.70 | | 1.11 | 0.0745 | 1 |
| 07914 | Boron | 7440-42-8 | 234 | | 11.1 | 0.934 | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.13 | | 1.11 | 0.0845 | 1 |
| 01650 | Calcium | 7440-70-2 | 28,900 | | 22.2 | 3.71 | 1 |
| 06951 | Chromium | 7440-47-3 | 61.9 | | 3.33 | 0.178 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.9 | | 1.11 | 0.110 | 1 |
| 06953 | Copper | 7440-50-8 | 49.7 | | 2.22 | 0.322 | 1 |
| 01654 | Iron | 7439-89-6 | 33,100 | | 88.9 | 8.05 | 2 |
| 06955 | Lead | 7439-92-1 | 26.7 | | 3.33 | 0.556 | 1 |
| 01656 | Lithium | 7439-93-2 | 144 | | 4.4 | 0.38 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,810 | | 11.1 | 1.86 | 1 |
| 06958 | Manganese | 7439-96-5 | 323 | | 1.11 | 0.0923 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 193 | | 2.22 | 0.189 | 1 |
| 06961 | Nickel | 7440-02-0 | 67.3 | | 2.22 | 0.145 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 350 | | 11.1 | 3.21 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,560 | | 111 | 9.27 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,280 | | 111 | 18.6 | 1 |
| 06969 | Tin | 7440-31-5 | 368 | | 11.1 | 0.245 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,710 | | 1.11 | 0.189 | 1 |
| 06971 | Vanadium | 7440-62-2 | 131 | | 1.11 | 0.145 | 1 |
| 06972 | Zinc | 7440-66-6 | 118 | | 4.45 | 0.222 | 1 |
| 10146 | Zirconium | 7440-67-7 | 114 | | 5.56 | 0.934 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.14 | | 0.445 | 0.111 | 2 |
| 06142 | Silver | 7440-22-4 | 11.7 | | 0.222 | 0.0289 | 2 |
| 06144 | Strontium | 7440-24-6 | 61.3 | | 0.445 | 0.0756 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.801 | | 0.222 | 0.0333 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.199 | | 0.0188 | 0.0113 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MSD Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470318**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 13.5 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-SA8-TR-5.0 MSD Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470318**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 22.7 | B | 1.13 | 0.0558 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 109 | | 5.67 | 0.0538 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 110 | | 5.67 | 0.0507 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 109 | B | 5.67 | 0.0510 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 111 | B | 5.67 | 0.0506 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 110 | B | 5.67 | 0.0576 | 1 |
| 11031 | OCDD | 3268-87-9 | 211 | B | 11.3 | 0.0363 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 23.5 | | 1.13 | 0.0490 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 110 | B | 5.67 | 0.0358 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 110 | B | 5.67 | 0.0386 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 114 | B | 5.67 | 0.0763 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 113 | B | 5.67 | 0.0615 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 110 | B | 5.67 | 0.0912 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 109 | B | 5.67 | 0.0704 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 107 | B | 5.67 | 0.0422 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 109 | B | 5.67 | 0.0969 | 1 |
| 11031 | OCDF | 39001-02-0 | 220 | B | 11.3 | 0.0522 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 71 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 64 | 29 - 147 |
| 13C12-1234678-HpCDF | 111 | 28 - 143 |
| 13C12-1234789-HpCDF | 55 | 26 - 138 |
| 13C12-OCDF | 45 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MSD Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470318**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MSD Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470318**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/26/2014 18:35 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/22/2014 13:51 | Marie D Beamenderfer | 22.05 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414034557 | 05/20/2014 19:36 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414034557 | 05/20/2014 19:36 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 05:30 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 21:41 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 22:03 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/30/2014 22:09 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:22 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 MSD Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470318**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:07 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:45 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:45 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:45 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:45 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 09:03 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 DUP Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470319**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 28,500 | | 45.8 | 8.25 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.58 | U | 4.58 | 0.847 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.17 | J | 4.58 | 0.801 | 1 |
| 06946 | Barium | 7440-39-3 | 121 | | 1.14 | 0.0378 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.959 | J | 1.14 | 0.0767 | 1 |
| 07914 | Boron | 7440-42-8 | 13.1 | | 11.4 | 0.961 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.14 | U | 1.14 | 0.0870 | 1 |
| 01650 | Calcium | 7440-70-2 | 40,500 | | 22.9 | 3.82 | 1 |
| 06951 | Chromium | 7440-47-3 | 34.5 | | 3.43 | 0.183 | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.96 | | 1.14 | 0.113 | 1 |
| 06953 | Copper | 7440-50-8 | 18.7 | | 2.29 | 0.332 | 1 |
| 01654 | Iron | 7439-89-6 | 30,600 | | 91.6 | 8.29 | 2 |
| 06955 | Lead | 7439-92-1 | 13.8 | | 3.43 | 0.572 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.4 | | 4.6 | 0.39 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,820 | | 11.4 | 1.91 | 1 |
| 06958 | Manganese | 7439-96-5 | 353 | | 1.14 | 0.0950 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.29 | U | 2.29 | 0.195 | 1 |
| 06961 | Nickel | 7440-02-0 | 17.6 | | 2.29 | 0.149 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 239 | | 11.4 | 3.31 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,720 | | 114 | 9.55 | 1 |
| 01667 | Sodium | 7440-23-5 | 161 | | 114 | 19.1 | 1 |
| 06969 | Tin | 7440-31-5 | 3.16 | J | 11.4 | 0.252 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,010 | | 1.14 | 0.195 | 1 |
| 06971 | Vanadium | 7440-62-2 | 60.7 | | 1.14 | 0.149 | 1 |
| 06972 | Zinc | 7440-66-6 | 62.2 | | 4.58 | 0.229 | 1 |
| 10146 | Zirconium | 7440-67-7 | 6.57 | | 5.72 | 0.961 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.458 | U | 0.458 | 0.114 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0649 | J | 0.229 | 0.0298 | 2 |
| 06144 | Strontium | 7440-24-6 | 52.2 | | 0.458 | 0.0778 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.339 | | 0.229 | 0.0343 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0129 | J | 0.0186 | 0.0111 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.21 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 13.5 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 12.4 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-5.0 DUP Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470319**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:17

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54850 SDG#: PH185-05DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:14 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 08:59 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:33 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:33 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:33 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:33 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 08:59 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14140039402A | 05/20/2014 20:20 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-10.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470320**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:09

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54810 SDG#: PH185-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 20.97 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 38 | U | 38 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 38 | U | 38 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 38 | U | 38 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.8 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.7 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.7 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 5.0 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.8 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.8 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-10.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470320**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:09

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54810 SDG#: PH185-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.6 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 22,900 | | 44.5 | 8.02 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.45 | U | 4.45 | 0.823 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.82 | J | 4.45 | 0.778 | 1 |
| 06946 | Barium | 7440-39-3 | 93.0 | | 1.11 | 0.0367 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.822 | J | 1.11 | 0.0745 | 1 |
| 07914 | Boron | 7440-42-8 | 10.9 | J | 11.1 | 0.934 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.11 | U | 1.11 | 0.0845 | 1 |
| 01650 | Calcium | 7440-70-2 | 27,900 | | 22.2 | 3.71 | 1 |
| 06951 | Chromium | 7440-47-3 | 27.0 | | 3.34 | 0.178 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.40 | | 1.11 | 0.110 | 1 |
| 06953 | Copper | 7440-50-8 | 14.7 | | 2.22 | 0.323 | 1 |
| 01654 | Iron | 7439-89-6 | 25,700 | | 44.5 | 4.03 | 1 |
| 06955 | Lead | 7439-92-1 | 10.0 | | 3.34 | 0.556 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.8 | | 4.4 | 0.38 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,460 | | 11.1 | 1.86 | 1 |
| 06958 | Manganese | 7439-96-5 | 308 | | 1.11 | 0.0923 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.22 | U | 2.22 | 0.189 | 1 |
| 06961 | Nickel | 7440-02-0 | 16.1 | | 2.22 | 0.145 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 227 | | 11.1 | 3.21 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,360 | | 111 | 9.28 | 1 |
| 01667 | Sodium | 7440-23-5 | 129 | | 111 | 18.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.24 | J | 11.1 | 0.245 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,090 | | 1.11 | 0.189 | 1 |
| 06971 | Vanadium | 7440-62-2 | 50.0 | | 1.11 | 0.145 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.1 | | 4.45 | 0.222 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.45 | J | 5.56 | 0.934 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.445 | U | 0.445 | 0.111 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0543 | J | 0.222 | 0.0289 | 2 |
| 06144 | Strontium | 7440-24-6 | 44.9 | | 0.445 | 0.0756 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.305 | | 0.222 | 0.0334 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0163 | J | 0.0190 | 0.0114 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-548-SA8-TR-10.0 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7470320**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:09

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54810 SDG#: PH185-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 8.12 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.7 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-10.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470320**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:09

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54810 SDG#: PH185-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0380 JB | 1.14 | 0.0281 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0744 JQ | 5.69 | 0.0255 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.69 U | 5.69 | 0.0179 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0283 JBQ | 5.69 | 0.0186 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0296 JBQ | 5.69 | 0.0186 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.107 JBQ | 5.69 | 0.0160 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.401 JBQ | 11.4 | 0.0262 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0245 JQ | 1.14 | 0.0217 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0948 JBQ | 5.69 | 0.0118 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0429 JBQ | 5.69 | 0.0129 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0303 JBQ | 5.69 | 0.0159 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0498 JBQ | 5.69 | 0.0124 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0188 JBQ | 5.69 | 0.0187 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0348 JB | 5.69 | 0.0136 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0422 JB | 5.69 | 0.00498 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0297 JBQ | 5.69 | 0.0112 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.154 JBQ | 11.4 | 0.0284 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0419 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 71 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 83 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 72 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 109 | 28 - 143 |
| 13C12-1234789-HpCDF | 56 | 26 - 138 |
| 13C12-OCDF | 47 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-10.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470320**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:09

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54810 SDG#: PH185-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-10.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470320**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:09

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54810 SDG#: PH185-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLD026 | 05/27/2014 04:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLD026 | 05/23/2014 04:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14141A16A | 05/21/2014 23:56 | Marie D Beamenderfer | 20.97 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414034557 | 05/20/2014 19:38 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414034557 | 05/20/2014 19:39 | Lois E Hiltz | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141420007A | 05/26/2014 05:48 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141420007A | 05/22/2014 16:40 | JoElla L Rice | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141410016A | 05/23/2014 22:03 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141410017A | 05/23/2014 22:25 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141410017A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141410016A | 05/21/2014 16:30 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14147001 | 05/31/2014 05:57 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14147001 | 05/27/2014 10:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-548-SA8-TR-10.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7470320**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 13:09

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54810 SDG#: PH185-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:37 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:52 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:52 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:52 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:52 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638001 | 05/23/2014 09:05 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638001 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14140039402A | 05/20/2014 20:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401A | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-051914 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7470321**
**LL Group # 1475629**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/19/2014 08:00

Submitted: 05/20/2014 09:45
Reported: 06/02/2014 13:39

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB219 SDG#: PH185-07TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 14:10 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 14:10 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLD026 | Sample number(s): 7470312-7470318,7470320 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 108 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 91 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 118 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 117 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 80-119 | | |
| Batch number: 14141A16A | Sample number(s): 7470313,7470315-7470318,7470320 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 80 | | 67-120 | | |
| Batch number: 14142A94A | Sample number(s): 7470321 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 109 | 111 | 80-133 | 2 | 30 |
| Batch number: 141420007A | Sample number(s): 7470312-7470318,7470320 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 84 | 87 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 95 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 102 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141410016A | Sample number(s): 7470312-7470318,7470320 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 117* | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 120 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 119 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 66 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 60-115 | | |
| Batch number: 141410017A | Sample number(s): 7470312-7470318,7470320 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 71* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 74* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 73* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 53 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 57* | | 60-115 | | |
| Batch number: 141410638001 | Sample number(s): 7470312-7470320 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 96 | | 85-120 | | |
| Batch number: 141430637001 | Sample number(s): 7470312-7470320 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 106 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 106 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 104 | | 80-120 | | |
| Calcium | 7.84 | J | 20.0 | 3.34 | mg/kg | 102 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 103 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 106 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 108 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 105 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 103 | | 80-120 | | |
| Tin | 1.46 | J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 106 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 103 | | 80-120 | | |
| Zinc | 0.461 | J | 4.00 | 0.200 | mg/kg | 103 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 104 | | 80-120 | | |
| Batch number: 141430637001A | Sample number(s): 7470312-7470320 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 106 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 100 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 106 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141430637001B | Sample number(s): 7470312-7470320 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 106 | | 80-120 | | |
| Batch number: 14140039402A | Sample number(s): 7470312-7470316,7470319-7470320 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 90-110 | | |
| Batch number: 14142162401A | Sample number(s): 7470312-7470320 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14147001 | Sample number(s): 7470312-7470318,7470320 | | | | | | | | |
| 2378-TCDD | 0.0397 J | 1.00 | 0.0262 | ng/kg | 99 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0220 | ng/kg | 97 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0136 | ng/kg | 94 | | 70-164 | | |
| 123678-HxCDD | 0.0211 J | 5.00 | 0.0139 | ng/kg | 92 | | 76-134 | | |
| 123789-HxCDD | 0.0209 J | 5.00 | 0.0144 | ng/kg | 95 | | 64-162 | | |
| 1234678-HpCDD | 0.0514 J | 5.00 | 0.0152 | ng/kg | 97 | | 70-140 | | |
| OCDD | 0.217 J | 10.0 | 0.0156 | ng/kg | 92 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0207 | ng/kg | 100 | | 75-158 | | |
| 12378-PeCDF | 0.0315 J | 5.00 | 0.0107 | ng/kg | 95 | | 80-134 | | |
| 23478-PeCDF | 0.0159 J | 5.00 | 0.0116 | ng/kg | 96 | | 68-160 | | |
| 123478-HxCDF | 0.0282 J | 5.00 | 0.0107 | ng/kg | 98 | | 72-134 | | |
| 123678-HxCDF | 0.0254 J | 5.00 | 0.00903 | ng/kg | 95 | | 84-130 | | |
| 123789-HxCDF | 0.0446 J | 5.00 | 0.0106 | ng/kg | 93 | | 78-130 | | |
| 234678-HxCDF | 0.0380 J | 5.00 | 0.0100 | ng/kg | 93 | | 70-156 | | |
| 1234678-HpCDF | 0.0453 J | 5.00 | 0.00589 | ng/kg | 92 | | 82-122 | | |
| 1234789-HpCDF | 0.0269 J | 5.00 | 0.0123 | ng/kg | 97 | | 78-138 | | |
| OCDF | 0.125 J | 10.0 | 0.0252 | ng/kg | 95 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00728 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLD026 | Sample number(s): 7470312-7470318,7470320 UNSPK: 7470316 | | | | | | | | |
| Acenaphthene | 105 | 100 | 48-127 | 5 | 30 | | | | |
| Acenaphthylene | 102 | 97 | 60-128 | 5 | 30 | | | | |
| Anthracene | 106 | 100 | 52-126 | 6 | 30 | | | | |
| Benzo(a)anthracene | 104 | 103 | 44-143 | 0 | 30 | | | | |
| Benzo(a)pyrene | 93 | 92 | 49-137 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 107 | 105 | 26-142 | 2 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(e)pyrene | 85 | 83 | 63-111 | 2 | 30 | | | | |
| Benzo(g,h,i)perylene | 86 | 43 | 33-141 | 65* | 30 | | | | |
| Benzo(k)fluoranthene | 92 | 89 | 49-144 | 3 | 30 | | | | |
| Butylbenzylphthalate | 103 | 104 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 111 | 108 | 52-147 | 2 | 30 | | | | |
| Chrysene | 97 | 93 | 43-141 | 4 | 30 | | | | |
| Dibenz(a,h)anthracene | 96 | 91 | 25-145 | 5 | 30 | | | | |
| Diethylphthalate | 90 | 87 | 66-140 | 3 | 30 | | | | |
| Dimethylphthalate | 93 | 89 | 70-123 | 5 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 118 | 119 | 48-164 | 1 | 30 | | | | |
| Fluoranthene | 105 | 100 | 38-153 | 4 | 30 | | | | |
| Fluorene | 103 | 98 | 57-130 | 5 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 93 | 88 | 26-139 | 6 | 30 | | | | |
| 1-Methylnaphthalene | 95 | 92 | 59-139 | 3 | 30 | | | | |
| 2-Methylnaphthalene | 100 | 96 | 46-147 | 4 | 30 | | | | |
| Naphthalene | 97 | 93 | 52-136 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 91 | 85 | 39-134 | 7 | 30 | | | | |
| Di-n-octylphthalate | 115 | 116 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 102 | 96 | 50-137 | 6 | 30 | | | | |
| Pyrene | 94 | 91 | 26-143 | 3 | 30 | | | | |
| Batch number: 14141A16A | Sample number(s): 7470313,7470315-7470318,7470320 UNSPK: 7470316 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 80 | 87 | 69-123 | 15 | 30 | | | | |
| Batch number: 141420007A | Sample number(s): 7470312-7470318,7470320 UNSPK: 7470316 | | | | | | | | |
| PCB-1016 | 94 | 95 | 41-135 | 1 | 50 | | | | |
| PCB-1260 | 101 | 102 | 40-134 | 0 | 50 | | | | |
| Batch number: 141410016A | Sample number(s): 7470312-7470318,7470320 UNSPK: 7470316 | | | | | | | | |
| EFH (C12-C14) | 108 | 96 | 49-123 | 12 | 20 | | | | |
| EFH (C15-C20) | 112 | 99 | 49-123 | 12 | 20 | | | | |
| EFH (C21-C30) | 115 | 98 | 49-123 | 16 | 20 | | | | |
| EFH (C30-C40) | 114 | 75 | 49-123 | 42* | 20 | | | | |
| EFH (C8-C11) | 90 | 88 | 49-123 | 2 | 20 | | | | |
| Batch number: 141410017A | Sample number(s): 7470312-7470318,7470320 UNSPK: 7470316 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 72 | 70 | 49-123 | 3 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 74 | 71 | 49-123 | 4 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 73 | 71 | 49-123 | 3 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 62 | 58 | 49-123 | 7 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 60 | 64 | 49-123 | 5 | 20 | | | | |
| Batch number: 141410638001 | Sample number(s): 7470312-7470320 UNSPK: 7470316 BKG: 7470316 | | | | | | | | |
| 3a Mercury 7471A | 96 | 99 | 65-135 | 4 | 20 | 0.0110 J | 0.0111 J | 1 (1) | 20 |
| Batch number: 141430637001 | Sample number(s): 7470312-7470320 UNSPK: 7470316 BKG: 7470316 | | | | | | | | |
| Aluminum | 2456 (2) | 3885 (2) | 75-125 | 8 | 20 | 25,100 | 24,700 | 2 | 20 |
| Antimony | 41* | 34* | 75-125 | 20 | 20 | 3.92 U | 3.96 U | 0 (1) | 20 |
| Arsenic | 105 | 95 | 75-125 | 10 | 20 | 2.52 J | 2.75 J | 9 (1) | 20 |
| Barium | 93 | 100 | 75-125 | 3 | 20 | 106 | 104 | 2 | 20 |
| Beryllium | 100 | 103 | 75-125 | 1 | 20 | 0.865 J | 0.830 J | 4 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 99 | 100 | 75-125 | 1 | 20 | 10.9 | 11.3 | 3 (1) | 20 |
| Cadmium | 80 | 74* | 75-125 | 9 | 20 | 0.980 U | 0.990 U | 0 (1) | 20 |
| Calcium | 11145 (2) | 2442 (2) | 75-125 | 81* | 20 | 15,600 | 35,000 | 77* | 20 |
| Chromium | 100 | 119 | 75-125 | 6 | 20 | 30.6 | 29.8 | 3 | 20 |
| Cobalt | 88 | 90 | 75-125 | 0 | 20 | 6.06 | 7.75 | 24* | 20 |
| Copper | 104 | 110 | 75-125 | 3 | 20 | 16.5 | 16.1 | 2 | 20 |
| Iron | -1341 (2) | 1088 (2) | 75-125 | 9 | 20 | 27,600 | 26,500 | 4 | 20 |
| Lead | 72* | 81 | 75-125 | 5 | 20 | 11.4 | 11.9 | 5 (1) | 20 |
| Lithium | 103 | 106 | 75-125 | 1 | 20 | 22.6 | 22.0 | 3 | 20 |
| Magnesium | 13 (2) | 323 (2) | 75-125 | 9 | 20 | 6,130 | 5,900 | 4 | 20 |
| Manganese | 95 (2) | 112 (2) | 75-125 | 2 | 20 | 226 | 305 | 30* | 20 |
| Molybdenum | 86 | 87 | 75-125 | 2 | 20 | 1.96 U | 1.98 U | 0 (1) | 20 |
| Nickel | 86 | 90 | 75-125 | 2 | 20 | 14.8 | 15.2 | 3 | 20 |
| Phosphorus | 104 | 99 | 75-125 | 2 | 20 | 208 | 207 | 0 | 20 |
| Potassium | 126* | 164* | 75-125 | 9 | 20 | 2,370 | 2,350 | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 1 | 20 | 141 | 140 | 1 (1) | 20 |
| Tin | 82 | 82 | 75-125 | 2 | 20 | 2.89 J | 2.74 J | 6 (1) | 20 |
| Titanium | 445 (2) | 622 (2) | 75-125 | 12 | 20 | 885 | 874 | 1 | 20 |
| Vanadium | 109 | 125 | 75-125 | 6 | 20 | 53.3 | 52.5 | 2 | 20 |
| Zinc | 87 | 96 | 75-125 | 4 | 20 | 55.7 | 53.8 | 3 | 20 |
| Zirconium | 96 | 97 | 75-125 | 1 | 20 | 5.22 | 5.69 | 8 (1) | 20 |
| Batch number: 141430637001A | Sample number(s): 7470312-7470320 UNSPK: 7470316 BKG: 7470316 | | | | | | | | |
| Silver | 100 | 105 | 75-125 | 2 | 20 | 0.0429 J | 0.0562 J | 27* (1) | 20 |
| Strontium | 122 (2) | 153 (2) | 75-125 | 4 | 20 | 41.3 | 45.1 | 9 | 20 |
| Thallium | 99 | 109 | 75-125 | 4 | 20 | 0.274 | 0.293 | 7 (1) | 20 |
| Batch number: 141430637001B | Sample number(s): 7470312-7470320 UNSPK: 7470316 BKG: 7470316 | | | | | | | | |
| Selenium | 94 | 96 | 75-125 | 1 | 20 | 0.392 U | 0.396 U | 0 (1) | 20 |
| Batch number: 14140039402A | Sample number(s): 7470312-7470316,7470319-7470320 BKG: 7470316 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.19 | 8.21 | 0 | 3 |
| Batch number: 14142162401A | Sample number(s): 7470312-7470320 BKG: 7470316 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 13.5 | 12.4 | 9 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 13.5 | 12.4 | 9 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 13.5 | 12.4 | 9 | 20 |
| Batch number: 14147001 | Sample number(s): 7470312-7470318,7470320 UNSPK: 7470316 | | | | | | | | |
| 2378-TCDD | 97 | 100 | 40-135 | 4 | 20 | | | | |
| 12378-PeCDD | 96 | 97 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 98 | 97 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDD | 95 | 96 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDD | 99 | 98 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 98 | 97 | 40-135 | 1 | 20 | | | | |
| OCDD | 94 | 93 | 40-135 | 0 | 20 | | | | |
| 2378-TCDF | 99 | 104 | 40-135 | 6 | 20 | | | | |
| 12378-PeCDF | 95 | 97 | 40-135 | 3 | 20 | | | | |
| 23478-PeCDF | 98 | 97 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 101 | 101 | 40-135 | 1 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 123678-HxCDF | 100 | 100 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDF | 97 | 97 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 98 | 96 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDF | 97 | 94 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 99 | 96 | 40-135 | 1 | 20 | | | | |
| OCDF | 97 | 97 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14142SLD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7470312 | 98 | 106 | 87 |
| 7470313 | 95 | 109 | 83 |
| 7470314 | 96 | 105 | 89 |
| 7470315 | 96 | 99 | 84 |
| 7470316 | 95 | 106 | 84 |
| 7470317 | 101 | 112 | 90 |
| 7470318 | 96 | 105 | 86 |
| 7470320 | 96 | 107 | 85 |
| Blank | 104 | 117 | 90 |
| LCS | 103 | 117 | 92 |
| MS | 101 | 112 | 90 |
| MSD | 96 | 105 | 86 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14141A16A

| | Trifluorotoluene-F |
|---|---|
| 7470313 | 85 |
| 7470315 | 83 |
| 7470316 | 85 |
| 7470317 | 87 |
| 7470318 | 95 |
| 7470320 | 84 |
| Blank | 99 |
| LCS | 100 |
| MS | 87 |
| MSD | 95 |
| Limits: | 50-142 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

## Surrogate Quality Control

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14142A94A

| | Trifluorotoluene-F |
|---|---|
| 7470321 | 87 |
| Blank | 86 |
| LCS | 97 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141420007A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7470312 | 97 | 105 |
| 7470313 | 94 | 102 |
| 7470314 | 97 | 103 |
| 7470315 | 99 | 103 |
| 7470316 | 98 | 109 |
| 7470317 | 100 | 108 |
| 7470318 | 104 | 111 |
| 7470320 | 102 | 102 |
| Blank | 103 | 113 |
| LCS | 102 | 109 |
| LCSD | 107 | 113 |
| MS | 100 | 108 |
| MSD | 104 | 111 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141410016A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7470312 | 91 | 102 |
| 7470313 | 100 | 118 |
| 7470314 | 91 | 104 |
| 7470315 | 108 | 116 |
| 7470316 | 92 | 101 |
| 7470317 | 94 | 106 |
| 7470318 | 86 | 94 |
| 7470320 | 91 | 99 |
| Blank | 94 | 106 |
| LCS | 96 | 116 |
| MS | 94 | 106 |
| MSD | 86 | 94 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141410017A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7470312 | 67 | 75 |
| 7470313 | 70 | 76 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7470314 | 54 | 61* |
| 7470315 | 50 | 52* |
| 7470316 | 59 | 64* |
| 7470317 | 65 | 72 |
| 7470318 | 66 | 72 |
| 7470320 | 51 | 51* |
| Blank | 76 | 83 |
| LCS | 62 | 72 |
| MS | 65 | 72 |
| MSD | 66 | 72 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14147001

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7470312 | 67 | 73 | 80 | 81 | 80 | 83 |
| 7470313 | 65 | 73 | 78 | 78 | 77 | 83 |
| 7470314 | 72 | 80 | 82 | 82 | 82 | 87 |
| 7470315 | 70 | 81 | 83 | 82 | 80 | 86 |
| 7470316 | 66 | 70 | 71 | 73 | 72 | 68 |
| 7470317 | 74 | 80 | 83 | 84 | 83 | 83 |
| 7470318 | 68 | 78 | 83 | 83 | 82 | 80 |
| 7470320 | 71 | 76 | 81 | 80 | 78 | 79 |
| Blank | 72 | 78 | 83 | 84 | 83 | 85 |
| MS | 74 | 80 | 83 | 84 | 83 | 83 |
| MSD | 68 | 78 | 83 | 83 | 82 | 80 |
| OPR | 74 | 84 | 87 | 86 | 86 | 88 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7470312 | 77 | 63 | 81 | 69 | 71 | 86 |
| 7470313 | 74 | 60 | 82 | 67 | 66 | 81 |
| 7470314 | 80 | 67 | 89 | 76 | 71 | 83 |
| 7470315 | 76 | 65 | 87 | 74 | 69 | 85 |
| 7470316 | 62 | 64 | 76 | 66 | 66 | 77 |
| 7470317 | 75 | 72 | 88 | 76 | 75 | 86 |
| 7470318 | 71 | 64 | 84 | 72 | 71 | 86 |
| 7470320 | 72 | 67 | 83 | 69 | 69 | 83 |
| Blank | 80 | 65 | 81 | 69 | 66 | 80 |
| MS | 75 | 72 | 88 | 76 | 75 | 86 |
| MSD | 71 | 64 | 84 | 72 | 71 | 86 |
| OPR | 89 | 64 | 84 | 75 | 68 | 82 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7470312 | 74 | 62 | 119 | 60 | 51 |
| 7470313 | 70 | 72 | 118 | 53 | 43 |
| 7470314 | 73 | 79 | 124 | 60 | 50 |
| 7470315 | 73 | 64 | 122 | 53 | 44 |
| 7470316 | 68 | 60 | 93 | 52 | 43 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475629
Reported: 06/02/14 at 01:39 PM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| 7470317 | 77 | 84 | 107 | 64 | 56 |
| 7470318 | 75 | 64 | 111 | 55 | 45 |
| 7470320 | 72 | 62 | 109 | 56 | 47 |
| Blank | 70 | 73 | 108 | 59 | 53 |
| MS | 77 | 84 | 107 | 64 | 56 |
| MSD | 75 | 64 | 111 | 55 | 45 |
| OPR | 74 | 72 | 111 | 64 | 59 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only
Acct. # 13013 Group# 1475629 Sample # 1470312-21

**COC #** 213662

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: CDMSmith Acct. #:
Project Name/#: SSFL PWSID #:
Project Manager: John Wondolleck P.O.#:
Sampler: Quote #:
Name of state where samples were collected: CA

**For Lab Use Only**
FSC:
SCR#:

**Preservation Codes**
H=HCl T=Thiosulfate
N=$HNO_3$ B=NaOH
S=$H_2SO_4$ O=Other

| (2) Sample Identification | Date Collected | Time Collected | (3) Grab | Composite | Matrix (4) Soil | Water | Other | Total # of Containers | (5) Analyses Requested: Preservation Codes — Metals + Hg EPA 6010, 6020, 7471 | PAH 8270 SIM | Dioxins 1613 | RCRs/RTs 8082 | pH 9045 | TPH-GRO 9015 | TPH-EFH 8015 | | | Remarks | (6) Temperature of samples upon receipt (if requested) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-534-SA8-TR-0.5 | 05/19/14 | 09:10 | X | | X | | | 2 | X | X | X | X | X | | X | | | | |
| SL-534-SA8-TR-5.0 | 05/19/14 | 09:40 | X | | X | | | 4 | X | X | X | X | X | X | X | | | | |
| SL-548-SA8-TR-0.5 | 05/19/14 | 1337 | X | | X | | | 2 | X | X | X | X | X | | X | | | | |
| SL-848-SA8-TR-5.0 | 05/19/14 | 1322 | X | | X | | | 4 | X | X | X | X | X | X | X | | | | |
| SL-548-SA8-TR-5.0MS | 05/19/14 | 1317 | X | | X | | | 10 | X | X | X | X | X | X | X | | | MS/MSD | |
| SL-548-SA8-TR-10.0 | 05/19/14 | 1309 | X | | X | | | 4 | X | X | X | X | X | X | X | | | | |
| TB2-051914 | 05/19/14 | 0900 | | | | X | | 3 | | | | | | X | | | | | |

(7) **Turnaround Time Requested** (TAT) (please circle): (Normal) Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: 10 day
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes (No)

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| [signature] | 05/19/14 | 1600 | | | |
| Relinquished by: | Date | Time | Received by: | Date | Time |
| Relinquished by: | Date | Time | Received by: | Date | Time |
| Relinquished by: | Date | Time | Received by: | Date | Time |
| Relinquished by: | Date | Time | Received by: [signature] | 5/20/14 | 945 |

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.



Airbill #: 7700 2994 1000 Cooler 2 Trenching 1 of 1 2 of 2 SMS 9/14

2102.03

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 14971

Group Number(s): 1475629

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/20/2014 9:45 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:19 on 05/20/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 28, 2014

Project: SSFL Phase 3 Sampling

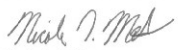
Submittal Date: 05/21/2014
Group Number: 1475898
SDG: PH186
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-052014 Water | 7471511 |
| SVL-525-SA5C-SB-10.0-11.0 Soil | 7471512 |
| SVL-525-SA5C-SB-15.0-16.0 Soil | 7471513 |
| SVL-531-SA5C-SB-2.5-2.9 Soil | 7471514 |
| SVL-525-SA5C-SB-5.0-6.0 Soil | 7471515 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB2-052014 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7471511**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:00

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB2-- SDG#: PH186-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052014 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7471511**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:00

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB2-- SDG#: PH186-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 12:25 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 12:25 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-10.0-11.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471512**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:49 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52510 SDG#: PH186-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.85 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.85 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.85 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.85 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.85 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 20 | 0.85 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.85 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.85 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.85 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.85 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.85 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.85 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.85 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.85 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-10.0-11.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471512**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:49 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52510 SDG#: PH186-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.85 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.85 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.85 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.85 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.85 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.85 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.85 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.85 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.85 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.85 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.85 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.85 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 16.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/23/2014 23:56 | Christopher G Torres | 0.85 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:25 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-10.0-11.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471512**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:49 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52510 SDG#: PH186-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414134571 | 05/21/2014 16:24 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:18 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471513**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:54 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52515 SDG#: PH186-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.89 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.89 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.89 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.89 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 20 | 0.89 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.89 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.89 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471513**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:54 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52515 SDG#: PH186-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.89 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.89 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.89 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.89 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.89 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/24/2014 00:18 | Christopher G Torres | 0.89 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:25 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-15.0-16.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471513**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:54 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52515 SDG#: PH186-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414134571 | 05/21/2014 16:25 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:20 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-531-SA5C-SB-2.5-2.9 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471514**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 14:05 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53125 SDG#: PH186-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.93 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.93 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.93 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.93 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 20 | 0.93 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.93 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.93 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.93 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.93 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-531-SA5C-SB-2.5-2.9 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471514**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 14:05 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53125 SDG#: PH186-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.93 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.93 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.93 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.93 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.93 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.93 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.93 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.93 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.93 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.93 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.93 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/24/2014 00:41 | Christopher G Torres | 0.93 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:25 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-531-SA5C-SB-2.5-2.9 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471514**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 14:05 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53125 SDG#: PH186-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414134571 | 05/21/2014 16:25 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:22 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471515**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:44 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52550 SDG#: PH186-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 32 | | 19 | 7 | 0.81 |
| 10237 | Acrolein | 107-02-8 | 94 | U | 94 | 19 | 0.81 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.81 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.81 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.81 |
| 10237 | 2-Butanone | 78-93-3 | 4 | J | 9 | 4 | 0.81 |
| 10237 | t-Butyl alcohol | 75-65-0 | 47 | U | 47 | 19 | 0.81 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.81 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.81 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.81 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.81 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.81 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.81 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.81 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.81 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.81 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.81 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471515**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:44 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52550 SDG#: PH186-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.81 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.81 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.81 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.81 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.81 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.81 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.81 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.81 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 13.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141431AA | 05/24/2014 01:03 | Christopher G Torres | 0.81 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:25 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-525-SA5C-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7471515**
**LL Group # 1475898**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:44 by VV

Submitted: 05/21/2014 09:50
Reported: 05/28/2014 13:16

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52550 SDG#: PH186-05*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414134571 | 05/21/2014 16:25 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414134571 | 05/21/2014 16:23 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475898
Reported: 05/28/14 at 01:16 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7471512-7471515 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 98 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 79 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 87 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 92 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 97 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 105 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 121 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 107 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 109 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 94 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 118 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 90 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 113 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 102 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 83 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 113 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 93 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 89 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 64 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 90 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 104 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 101 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 120 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 111 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 92 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 97 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 95 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475898
Reported: 05/28/14 at 01:16 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 91 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 90 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 97 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 98 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 118 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 93 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 92 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 116 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 102 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 85 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 105 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 106 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 91 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 96 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 102 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 100 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 105 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 105 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 71 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Batch number: Y141471AA | Sample number(s): 7471511 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475898
Reported: 05/28/14 at 01:16 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475898
Reported: 05/28/14 at 01:16 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14147162401A | Sample number(s): 7471512-7471515 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141431AA | Sample number(s): 7471512-7471515 UNSPK: P466839 | | | | | | | | |
| Acetone | 129 | 113 | 31-195 | 11 | 30 | | | | |
| Acrolein | 67 | 81 | 10-165 | 21 | 30 | | | | |
| Acrylonitrile | 96 | 82 | 48-139 | 13 | 30 | | | | |
| t-Amyl methyl ether | 111 | 94 | 50-132 | 14 | 30 | | | | |
| Benzene | 123 | 101 | 55-143 | 17 | 30 | | | | |
| Bromobenzene | 130 | 109 | 43-139 | 15 | 30 | | | | |
| Bromochloromethane | 127 | 120 | 60-137 | 3 | 30 | | | | |
| Bromodichloromethane | 126 | 104 | 53-136 | 17 | 30 | | | | |
| Bromoform | 131 | 105 | 50-144 | 20 | 30 | | | | |
| Bromomethane | 120 | 124 | 42-168 | 6 | 30 | | | | |
| 2-Butanone | 110 | 95 | 37-163 | 13 | 30 | | | | |
| t-Butyl alcohol | 117 | 115 | 47-153 | 0 | 30 | | | | |
| n-Butylbenzene | 117 | 101 | 30-146 | 12 | 30 | | | | |
| sec-Butylbenzene | 131 | 102 | 33-157 | 22 | 30 | | | | |
| tert-Butylbenzene | 125 | 108 | 41-152 | 13 | 30 | | | | |
| Carbon Disulfide | 118 | 94 | 48-146 | 20 | 30 | | | | |
| Carbon Tetrachloride | 152 | 123 | 51-165 | 18 | 30 | | | | |
| Chlorobenzene | 130 | 102 | 49-135 | 22 | 30 | | | | |
| Chloroethane | 113 | 117 | 39-152 | 6 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 76 | 92 | 32-139 | 21 | 30 | | | | |
| Chloroform | 144* | 119 | 61-142 | 17 | 30 | | | | |
| 1-Chlorohexane | 104 | 98 | 70-130 | 4 | 30 | | | | |
| Chloromethane | 98 | 99 | 36-143 | 4 | 30 | | | | |
| 2-Chlorotoluene | 123 | 104 | 42-146 | 14 | 30 | | | | |
| 4-Chlorotoluene | 122 | 104 | 39-145 | 13 | 30 | | | | |
| Chlorotrifluoroethene | 72 | 76 | 70-130 | 3 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 98 | 90 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 129* | 105 | 51-128 | 18 | 30 | | | | |
| 1,2-Dibromoethane | 122 | 99 | 54-129 | 19 | 30 | | | | |
| Dibromomethane | 124 | 103 | 57-130 | 17 | 30 | | | | |
| 1,2-Dichlorobenzene | 123 | 108 | 36-133 | 11 | 30 | | | | |
| 1,3-Dichlorobenzene | 128 | 104 | 34-134 | 19 | 30 | | | | |
| 1,4-Dichlorobenzene | 122 | 103 | 35-136 | 14 | 30 | | | | |
| Dichlorodifluoromethane | 121 | 122 | 26-151 | 3 | 30 | | | | |
| 1,1-Dichloroethane | 127 | 103 | 63-142 | 18 | 30 | | | | |
| 1,2-Dichloroethane | 149* | 120 | 54-143 | 19 | 30 | | | | |
| 1,1-Dichloroethene | 142 | 117 | 61-149 | 17 | 30 | | | | |
| cis-1,2-Dichloroethene | 128 | 105 | 67-135 | 18 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475898
Reported: 05/28/14 at 01:16 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 140 | 113 | 64-144 | 19 | 30 | | | | |
| 1,2-Dichloropropane | 116 | 97 | 54-144 | 16 | 30 | | | | |
| 1,3-Dichloropropane | 114 | 92 | 51-140 | 18 | 30 | | | | |
| 2,2-Dichloropropane | 129 | 104 | 53-147 | 19 | 30 | | | | |
| 1,1-Dichloropropene | 134 | 110 | 54-145 | 17 | 30 | | | | |
| cis-1,3-Dichloropropene | 117 | 93 | 45-137 | 20 | 30 | | | | |
| trans-1,3-Dichloropropene | 113 | 92 | 51-134 | 18 | 30 | | | | |
| Ethyl t-butyl ether | 110 | 94 | 58-124 | 13 | 30 | | | | |
| Ethylbenzene | 131 | 104 | 44-141 | 21 | 30 | | | | |
| Freon 113 | 142 | 115 | 56-156 | 18 | 30 | | | | |
| Freon 133a | 101 | 107 | 61-131 | 4 | 30 | | | | |
| Hexachlorobutadiene | 139 | 115 | 10-155 | 17 | 30 | | | | |
| 2-Hexanone | 96 | 81 | 32-160 | 15 | 30 | | | | |
| di-Isopropyl ether | 112 | 94 | 59-133 | 15 | 30 | | | | |
| Isopropylbenzene | 136 | 110 | 38-144 | 19 | 30 | | | | |
| p-Isopropyltoluene | 117 | 100 | 29-152 | 13 | 30 | | | | |
| Methyl Iodide | 148* | 120 | 52-139 | 18 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 121 | 101 | 55-129 | 15 | 30 | | | | |
| 4-Methyl-2-pentanone | 100 | 83 | 46-139 | 16 | 30 | | | | |
| Methylene Chloride | 188* | 238* | 60-149 | 26 | 30 | | | | |
| n-Propylbenzene | 128 | 109 | 39-157 | 14 | 30 | | | | |
| Styrene | 128 | 102 | 35-134 | 20 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 134 | 106 | 55-139 | 21 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 104 | 89 | 29-182 | 13 | 30 | | | | |
| Tetrachloroethene | 151* | 122 | 42-149 | 19 | 30 | | | | |
| Toluene | 120 | 100 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 111 | 96 | 10-140 | 12 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 114 | 98 | 10-136 | 12 | 30 | | | | |
| 1,1,1-Trichloroethane | 131 | 106 | 52-146 | 19 | 30 | | | | |
| 1,1,2-Trichloroethane | 123 | 99 | 58-152 | 19 | 30 | | | | |
| Trichloroethene | 132 | 109 | 53-144 | 17 | 30 | | | | |
| Trichlorofluoromethane | 127 | 127 | 47-163 | 2 | 30 | | | | |
| 1,2,3-Trichloropropane | 120 | 98 | 36-180 | 18 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 127 | 108 | 37-149 | 14 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 126 | 110 | 38-150 | 11 | 30 | | | | |
| Vinyl Acetate | 30 | 23 | 21-139 | 25 | 30 | | | | |
| Vinyl Chloride | 104 | 108 | 50-154 | 6 | 30 | | | | |
| m+p-Xylene | 129 | 104 | 44-137 | 19 | 30 | | | | |
| o-Xylene | 124 | 99 | 42-137 | 20 | 30 | | | | |
| Batch number: 14147162401A | Sample number(s): 7471512-7471515 | | | | | BKG: P471535 | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.2 | 7.3 | 1 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475898
Reported: 05/28/14 at 01:16 PM

## Surrogate Quality Control

Batch number: B141431AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7471512 | 113 | 101 | 96 | 93 |
| 7471513 | 114 | 104 | 96 | 97 |
| 7471514 | 114 | 101 | 98 | 96 |
| 7471515 | 112 | 100 | 98 | 94 |
| Blank | 110 | 100 | 99 | 97 |
| LCS | 108 | 106 | 102 | 105 |
| MS | 110 | 103 | 101 | 104 |
| MSD | 111 | 105 | 97 | 95 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7471511 | 101 | 99 | 98 | 96 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 5/20/2014 | A-13013 | Contact Name: | Pam Hartman | COC No: 20140520-08 |
| CarrierName: | FedEx | G-1475898 | Contact Phone: | (818)466-8007 | Cooler #: 1 |
| AirbillNo: | 770044397602 | S-7471511-15 | | | Lab: Lancaster |
| | | | | | Lab Phone: 717-556-7259 |
| | | | | | Lab Address 2425 New Holland Pike Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-052014 | 5/20/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-525-SA5C-SB-10.0-11.0 | 5/20/14 11:49 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-525-SA5C-SB-10.0-11.0 | 5/20/14 11:49 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-525-SA5C-SB-15.0-16.0 | 5/20/14 11:54 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-525-SA5C-SB-15.0-16.0 | 5/20/14 11:54 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-531-SA5C-SB-2.5-2.9 | 5/20/14 14:05 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-531-SA5C-SB-2.5-2.9 | 5/20/14 14:05 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-525-SA5C-SB-5.0-6.0 | 5/20/14 11:44 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-525-SA5C-SB-5.0-6.0 | 5/20/14 11:44 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Van Vattarasen

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stey Mypel | 05/20/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

5.21.14 950

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15127

Group Number(s): 1475898

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/21/2014 9:50 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | Yes | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 11:13 on 05/21/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.3 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.2 | DT | Wet | Y | Bagged | N | N |

### Container Quantity Discrepancy Details: SSFL

| Sample ID on COC | Container Qty. Received | Container Qty. on COC | Comments |
|---|---|---|---|
| FDG2-SL-874-SA5A-0.0-0.5 | 3 | 2 | rec 1 4oz jar & 2 sleeves |

General Comments: TB1 rec 3 vials



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 03, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/21/2014
Group Number: 1475897
SDG: PH188
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB1-052014 Water | 7471503 |
| FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil | 7471504 |
| FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil | 7471505 |
| FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil | 7471506 |
| FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil | 7471507 |
| FDG2-SL-874-SA5A-SB-4.0-5.0DUP Grab Soil | 7471508 |
| FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil | 7471509 |
| FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil | 7471510 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB1-052014 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7471503**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:00 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

T-B-2 SDG#: PH188-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 14:35 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 14:35 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471504**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:20 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87400 SDG#: PH188-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471504**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:20 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87400 SDG#: PH188-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,200 | | 41.5 | 7.49 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.15 | U | 4.15 | 0.769 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.62 | J | 4.15 | 0.727 | 1 |
| 06946 | Barium | 7440-39-3 | 81.4 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.430 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 4.30 | J | 10.4 | 0.872 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.435 | J | 1.04 | 0.0789 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,680 | | 20.8 | 3.47 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.6 | | 3.12 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.62 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 6.73 | | 2.08 | 0.301 | 1 |
| 01654 | Iron | 7439-89-6 | 18,700 | | 41.5 | 3.76 | 1 |
| 06955 | Lead | 7439-92-1 | 4.19 | | 3.12 | 0.519 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.0 | | 4.2 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,760 | | 10.4 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 274 | | 1.04 | 0.0862 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.08 | U | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.51 | | 2.08 | 0.135 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 362 | | 10.4 | 3.00 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,900 | | 104 | 8.66 | 1 |
| 01667 | Sodium | 7440-23-5 | 107 | | 104 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.49 | J | 10.4 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,070 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.5 | | 1.04 | 0.135 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.4 | | 4.15 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.83 | J | 5.19 | 0.872 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.415 | U | 0.415 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.208 | U | 0.208 | 0.0270 | 2 |
| 06144 | Strontium | 7440-24-6 | 15.7 | | 0.415 | 0.0706 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.221 | | 0.208 | 0.0312 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0172 | U | 0.0172 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.04 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471504**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:20 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87400 SDG#: PH188-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.6 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471504**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:20 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87400 SDG#: PH188-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.149 JQ | 1.04 | 0.106 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0940 JBQ | 5.21 | 0.0673 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.21 U | 5.21 | 0.0348 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0631 JB | 5.21 | 0.0335 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.21 U | 5.21 | 0.0334 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.270 JBQ | 5.21 | 0.0491 | 1 |
| 11031 | OCDD | 3268-87-9 | 3.21 JB | 10.4 | 0.0359 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 U | 1.04 | 0.0743 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0519 JBQ | 5.21 | 0.0407 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.21 U | 5.21 | 0.0376 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0533 JBQ | 5.21 | 0.0389 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.21 U | 5.21 | 0.0351 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0794 JB | 5.21 | 0.0433 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.21 U | 5.21 | 0.0359 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0734 JBQ | 5.21 | 0.0180 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.21 U | 5.21 | 0.0281 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.209 JB | 10.4 | 0.0777 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0153 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 61 | 25 - 164 |
| 13C12-12378-PeCDD | 66 | 25 - 181 |
| 13C12-123478-HxCDD | 71 | 32 - 141 |
| 13C12-123678-HxCDD | 71 | 28 - 130 |
| 13C12-123789-HxCDD | 70 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 64 | 24 - 185 |
| 13C12-23478-PeCDF | 59 | 21 - 178 |
| 13C12-123478-HxCDF | 59 | 26 - 152 |
| 13C12-123678-HxCDF | 66 | 26 - 123 |
| 13C12-234678-HxCDF | 62 | 28 - 136 |
| 13C12-123789-HxCDF | 58 | 29 - 147 |
| 13C12-1234678-HpCDF | 81 | 28 - 143 |
| 13C12-1234789-HpCDF | 56 | 26 - 138 |
| 13C12-OCDF | 50 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471504**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:20 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87400 SDG#: PH188-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471504**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:20 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87400 SDG#: PH188-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 06:13 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 07:20 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 02:13 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 21:13 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 15:03 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-0.0-0.5 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471504**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:20 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87400 SDG#: PH188-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:24 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:28 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:28 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:28 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:28 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:13 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471505**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.2 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.4 | J | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.0 | J | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.9 | | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.91 | J | 1.8 | 0.71 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.27 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471505**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 16 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 31 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,200 | | 43.0 | 7.75 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.30 | U | 4.30 | 0.796 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.42 | | 4.30 | 0.753 | 1 |
| 06946 | Barium | 7440-39-3 | 247 | | 1.08 | 0.0355 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.604 | J | 1.08 | 0.0720 | 1 |
| 07914 | Boron | 7440-42-8 | 7.29 | J | 10.8 | 0.903 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.590 | J | 1.08 | 0.0817 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,140 | | 21.5 | 3.59 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.0 | | 3.23 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.61 | | 1.08 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 11.0 | | 2.15 | 0.312 | 1 |
| 01654 | Iron | 7439-89-6 | 20,000 | | 43.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 7.41 | | 3.23 | 0.538 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.3 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,540 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 313 | | 1.08 | 0.0892 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.474 | J | 2.15 | 0.183 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.9 | | 2.15 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 400 | | 10.8 | 3.11 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,470 | | 108 | 8.97 | 1 |
| 01667 | Sodium | 7440-23-5 | 119 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.57 | J | 10.8 | 0.237 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,160 | | 1.08 | 0.183 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.5 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 60.5 | | 4.30 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.29 | J | 5.38 | 0.903 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.148 | J | 0.430 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0297 | J | 0.215 | 0.0280 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.5 | | 0.430 | 0.0731 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.275 | | 0.215 | 0.0323 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0118 | J | 0.0174 | 0.0104 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471505**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.00 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 7.0 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471505**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.05 | U | 1.05 | 0.0519 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.192 | JBQ | 5.27 | 0.0391 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0535 | JQ | 5.27 | 0.0356 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.394 | JBQ | 5.27 | 0.0367 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.447 | JB | 5.27 | 0.0346 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.76 | JB | 5.27 | 0.0651 | 1 |
| 11031 | OCDD | 3268-87-9 | 14.0 | BQ | 10.5 | 0.0392 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.05 | U | 1.05 | 0.0521 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.266 | JB | 5.27 | 0.0295 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.252 | JB | 5.27 | 0.0305 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.134 | JBQ | 5.27 | 0.0340 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.129 | JBQ | 5.27 | 0.0310 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.422 | JBQ | 5.27 | 0.0331 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.112 | JB | 5.27 | 0.0332 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.386 | JBQ | 5.27 | 0.0173 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0420 | JB | 5.27 | 0.0292 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.953 | JB | 10.5 | 0.0526 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.158 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 58 | 25 - 164 |
| 13C12-12378-PeCDD | 60 | 25 - 181 |
| 13C12-123478-HxCDD | 64 | 32 - 141 |
| 13C12-123678-HxCDD | 62 | 28 - 130 |
| 13C12-123789-HxCDD | 63 | 28 - 130 |
| 13C12-1234678-HpCDD | 60 | 23 - 140 |
| 13C12-OCDD | 51 | 17 - 157 |
| 13C12-2378-TCDF | 54 | 24 - 169 |
| 13C12-12378-PeCDF | 62 | 24 - 185 |
| 13C12-23478-PeCDF | 53 | 21 - 178 |
| 13C12-123478-HxCDF | 54 | 26 - 152 |
| 13C12-123678-HxCDF | 59 | 26 - 123 |
| 13C12-234678-HxCDF | 56 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 69 | 28 - 143 |
| 13C12-1234789-HpCDF | 46 | 26 - 138 |
| 13C12-OCDF | 38 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471505**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471505**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 04:38 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 02:51 | Marie D Beamenderfer | 24.27 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 16:00 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 16:00 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 07:39 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 05:28 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 21:34 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 04:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471505**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:41 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:02 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:02 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:02 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:02 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:15 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471506**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 36 | | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 35 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 38 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 34 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 39 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 31 | | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 32 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 33 | | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 39 | | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 41 | | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 34 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 33 | | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 28 | | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 31 | | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 44 | | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 35 | | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 35 | | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 35 | | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 33 | | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 35 | | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 33 | | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 32 | | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 43 | | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 36 | | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 31 | | 1.8 | 0.71 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 8.4 | | 1 | 0.2 | 23.23 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 170 | | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 180 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.7 | J | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 9.0 | | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471506**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 28 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 52 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.1 | J | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.4 | J | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.8 | | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 13 | | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 15 | | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.5 | J | 5.4 | 2.2 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,000 | | 41.8 | 7.53 | 1 |
| 06944 | Antimony | 7440-36-0 | 27.0 | | 4.18 | 0.773 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.5 | | 4.18 | 0.731 | 1 |
| 06946 | Barium | 7440-39-3 | 320 | | 1.04 | 0.0345 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.86 | | 1.04 | 0.0699 | 1 |
| 07914 | Boron | 7440-42-8 | 213 | | 10.4 | 0.877 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.65 | | 1.04 | 0.0793 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,760 | | 20.9 | 3.49 | 1 |
| 06951 | Chromium | 7440-47-3 | 38.9 | | 3.13 | 0.167 | 1 |
| 06952 | Cobalt | 7440-48-4 | 55.6 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 37.6 | | 2.09 | 0.303 | 1 |
| 01654 | Iron | 7439-89-6 | 17,700 | | 41.8 | 3.78 | 1 |
| 06955 | Lead | 7439-92-1 | 22.8 | | 3.13 | 0.522 | 1 |
| 01656 | Lithium | 7439-93-2 | 127 | | 4.2 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,130 | | 10.4 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 395 | | 1.04 | 0.0866 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 200 | | 2.09 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 61.9 | | 2.09 | 0.136 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 511 | | 10.4 | 3.02 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,600 | | 104 | 8.71 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,110 | | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 379 | | 10.4 | 0.230 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,310 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 87.9 | | 1.04 | 0.136 | 1 |
| 06972 | Zinc | 7440-66-6 | 109 | | 4.18 | 0.209 | 1 |
| 10146 | Zirconium | 7440-67-7 | 106 | | 5.22 | 0.877 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.21 | | 0.418 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 11.0 | | 0.209 | 0.0271 | 2 |
| 06144 | Strontium | 7440-24-6 | 33.4 | | 0.418 | 0.0710 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.775 | | 0.209 | 0.0313 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.201 | | 0.0177 | 0.0106 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471506**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.0 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471506**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.6 | | 1.06 | 0.0693 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 99.3 | B | 5.28 | 0.0622 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 103 | | 5.28 | 0.0713 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 99.2 | B | 5.28 | 0.0766 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 101 | B | 5.28 | 0.0699 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 101 | B | 5.28 | 0.0686 | 1 |
| 11031 | OCDD | 3268-87-9 | 230 | B | 10.6 | 0.0548 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.1 | | 1.06 | 0.0960 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 102 | B | 5.28 | 0.0605 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 103 | B | 5.28 | 0.0589 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 102 | B | 5.28 | 0.107 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 100 | B | 5.28 | 0.101 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 100 | B | 5.28 | 0.111 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 103 | B | 5.28 | 0.111 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 98.7 | B | 5.28 | 0.0662 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 99.2 | B | 5.28 | 0.105 | 1 |
| 11031 | OCDF | 39001-02-0 | 198 | B | 10.6 | 0.0522 | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 77 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 75 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 91 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 56 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471506**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471506**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 05:10 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 03:28 | Marie D Beamenderfer | 23.23 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 15:54 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:54 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 07:57 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 05:49 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 21:56 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 05:20 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MS Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471506**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:52 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:09 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:09 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:09 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:09 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:25 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471507**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 35 | | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 36 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 37 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 40 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 38 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 31 | | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 40 | | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 39 | | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 36 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 30 | | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 32 | | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 43 | | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 40 | | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 36 | | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 34 | | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 33 | | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 36 | | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 35 | | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 31 | | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 43 | | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 39 | | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 35 | | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 8.3 | | 1 | 0.2 | 22.24 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 150 | | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 160 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.7 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.5 | | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471507**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 22 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 35 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.1 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 3.9 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.0 | | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 11 | | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 12 | | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.1 | J | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,000 | | 43.0 | 7.75 | 1 |
| 06944 | Antimony | 7440-36-0 | 27.7 | | 4.30 | 0.796 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.9 | | 4.30 | 0.753 | 1 |
| 06946 | Barium | 7440-39-3 | 326 | | 1.08 | 0.0355 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.06 | | 1.08 | 0.0720 | 1 |
| 07914 | Boron | 7440-42-8 | 219 | | 10.8 | 0.903 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.82 | | 1.08 | 0.0817 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,580 | | 21.5 | 3.59 | 1 |
| 06951 | Chromium | 7440-47-3 | 41.1 | | 3.23 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 57.6 | | 1.08 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 39.3 | | 2.15 | 0.312 | 1 |
| 01654 | Iron | 7439-89-6 | 18,600 | | 43.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 22.5 | | 3.23 | 0.538 | 1 |
| 01656 | Lithium | 7439-93-2 | 132 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,380 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 377 | | 1.08 | 0.0892 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 206 | | 2.15 | 0.183 | 1 |
| 06961 | Nickel | 7440-02-0 | 64.2 | | 2.15 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 441 | | 10.8 | 3.11 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,640 | | 108 | 8.97 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,150 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 390 | | 10.8 | 0.237 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,430 | | 1.08 | 0.183 | 1 |
| 06971 | Vanadium | 7440-62-2 | 92.3 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 108 | | 4.30 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 110 | | 5.38 | 0.903 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.27 | | 0.430 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 11.0 | | 0.215 | 0.0280 | 2 |
| 06144 | Strontium | 7440-24-6 | 32.5 | | 0.430 | 0.0731 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.757 | | 0.215 | 0.0323 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.181 | | 0.0177 | 0.0106 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471507**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.0 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471507**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.6 | | 1.05 | 0.0677 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 100 | B | 5.27 | 0.0613 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 103 | | 5.27 | 0.0899 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 98.4 | B | 5.27 | 0.0872 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 99.5 | B | 5.27 | 0.0875 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 99.3 | B | 5.27 | 0.0873 | 1 |
| 11031 | OCDD | 3268-87-9 | 208 | B | 10.5 | 0.0553 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 20.8 | | 1.05 | 0.0660 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 105 | B | 5.27 | 0.0604 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 104 | B | 5.27 | 0.0559 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 102 | B | 5.27 | 0.0979 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 99.3 | B | 5.27 | 0.0872 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 102 | B | 5.27 | 0.100 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 102 | B | 5.27 | 0.0936 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 98.8 | B | 5.27 | 0.0697 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 98.5 | B | 5.27 | 0.105 | 1 |
| 11031 | OCDF | 39001-02-0 | 196 | B | 10.5 | 0.0630 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 63 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 71 | 24 - 185 |
| 13C12-23478-PeCDF | 66 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 81 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 49 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471507**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471507**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 05:41 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 04:06 | Marie D Beamenderfer | 22.24 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 15:55 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:55 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 08:16 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 06:11 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 22:18 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 06:17 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0MSD Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471507**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:57 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:12 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:12 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:12 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:12 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:27 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-874-SA5A-SB-4.0-5.0DUP Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471508**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,200 | | 43.0 | 7.75 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.30 | U | 4.30 | 0.796 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.33 | J | 4.30 | 0.753 | 1 |
| 06946 | Barium | 7440-39-3 | 101 | | 1.08 | 0.0355 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.523 | J | 1.08 | 0.0720 | 1 |
| 07914 | Boron | 7440-42-8 | 5.30 | J | 10.8 | 0.903 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.528 | J | 1.08 | 0.0817 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,710 | | 21.5 | 3.59 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.6 | | 3.23 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.42 | | 1.08 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 9.61 | | 2.15 | 0.312 | 1 |
| 01654 | Iron | 7439-89-6 | 18,700 | | 43.0 | 3.89 | 1 |
| 06955 | Lead | 7439-92-1 | 5.89 | | 3.23 | 0.538 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.8 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,130 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 316 | | 1.08 | 0.0892 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.354 | J | 2.15 | 0.183 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.6 | | 2.15 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 381 | | 10.8 | 3.11 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,310 | | 108 | 8.97 | 1 |
| 01667 | Sodium | 7440-23-5 | 110 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.40 | J | 10.8 | 0.237 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,070 | | 1.08 | 0.183 | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.9 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.9 | | 4.30 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.39 | J | 5.38 | 0.903 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.127 | J | 0.430 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0320 | J | 0.215 | 0.0280 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.2 | | 0.430 | 0.0731 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.271 | | 0.215 | 0.0323 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0104 | J | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.96 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 7.0 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 7.9 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-4.0-5.0DUP Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471508**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87440 SDG#: PH188-03DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 20:48 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:07 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:07 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:07 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:07 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:23 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471509**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:25 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11744 SDG#: PH188-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.93 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.2 | J | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | J | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | J | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.89 | J | 1.8 | 0.72 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.32 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7471509**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:25 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11744 SDG#: PH188-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.4 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 21 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,900 | | 41.8 | 7.53 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.18 | U | 4.18 | 0.773 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.84 | J | 4.18 | 0.731 | 1 |
| 06946 | Barium | 7440-39-3 | 106 | | 1.04 | 0.0345 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.529 | J | 1.04 | 0.0699 | 1 |
| 07914 | Boron | 7440-42-8 | 4.55 | J | 10.4 | 0.877 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.565 | J | 1.04 | 0.0793 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,440 | | 20.9 | 3.49 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.4 | | 3.13 | 0.167 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.58 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 10.0 | | 2.09 | 0.303 | 1 |
| 01654 | Iron | 7439-89-6 | 20,100 | | 41.8 | 3.78 | 1 |
| 06955 | Lead | 7439-92-1 | 5.67 | | 3.13 | 0.522 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.1 | | 4.2 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,420 | | 10.4 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 367 | | 1.04 | 0.0867 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.277 | J | 2.09 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.0 | | 2.09 | 0.136 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 412 | | 10.4 | 3.02 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,450 | | 104 | 8.71 | 1 |
| 01667 | Sodium | 7440-23-5 | 104 | J | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.49 | J | 10.4 | 0.230 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.8 | | 1.04 | 0.136 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.4 | | 4.18 | 0.209 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.87 | J | 5.22 | 0.877 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.161 | J | 0.418 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.209 | U | 0.209 | 0.0271 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.4 | | 0.418 | 0.0710 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.289 | | 0.209 | 0.0313 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0124 | J | 0.0171 | 0.0102 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471509**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:25 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11744 SDG#: PH188-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.24 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 7.9 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471509**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:25 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11744 SDG#: PH188-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.08 | U | 1.08 | 0.0787 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.172 | JBQ | 5.38 | 0.0644 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.38 | U | 5.38 | 0.0451 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.297 | JBQ | 5.38 | 0.0445 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.392 | JB | 5.38 | 0.0425 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.842 | JB | 5.38 | 0.0545 | 1 |
| 11031 | OCDD | 3268-87-9 | 6.72 | JB | 10.8 | 0.0407 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.122 | JQ | 1.08 | 0.0719 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.239 | JBQ | 5.38 | 0.0344 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.187 | JBQ | 5.38 | 0.0333 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0937 | JBQ | 5.38 | 0.0399 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.106 | JBQ | 5.38 | 0.0367 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.370 | JB | 5.38 | 0.0440 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.107 | JBQ | 5.38 | 0.0391 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.192 | JB | 5.38 | 0.0159 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0562 | JBQ | 5.38 | 0.0268 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.500 | JB | 10.8 | 0.0752 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0887 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 69 | 25 - 181 |
| 13C12-123478-HxCDD | 72 | 32 - 141 |
| 13C12-123678-HxCDD | 72 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 69 | 23 - 140 |
| 13C12-OCDD | 58 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 62 | 21 - 178 |
| 13C12-123478-HxCDF | 64 | 26 - 152 |
| 13C12-123678-HxCDF | 68 | 26 - 123 |
| 13C12-234678-HxCDF | 64 | 28 - 136 |
| 13C12-123789-HxCDF | 65 | 29 - 147 |
| 13C12-1234678-HpCDF | 78 | 28 - 143 |
| 13C12-1234789-HpCDF | 52 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471509**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:25 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11744 SDG#: PH188-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471509**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:25 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11744 SDG#: PH188-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 06:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/28/2014 23:04 | Marie D Beamenderfer | 22.32 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 16:04 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:51 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 08:34 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 06:54 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 22:39 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 15:59 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-1174-SA5A-SB-4.0-5.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471509**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:25 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

11744 SDG#: PH188-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:28 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:31 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:31 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:31 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:31 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:29 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471510**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87412 SDG#: PH188-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.98 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471510**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87412 SDG#: PH188-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,000 | | 41.0 | 7.38 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.758 | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.35 | | 4.10 | 0.717 | 1 |
| 06946 | Barium | 7440-39-3 | 73.9 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.540 | J | 1.02 | 0.0686 | 1 |
| 07914 | Boron | 7440-42-8 | 3.61 | J | 10.2 | 0.860 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.541 | J | 1.02 | 0.0778 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,300 | | 20.5 | 3.42 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.8 | | 3.07 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.96 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 9.98 | | 2.05 | 0.297 | 1 |
| 01654 | Iron | 7439-89-6 | 25,200 | | 41.0 | 3.71 | 1 |
| 06955 | Lead | 7439-92-1 | 5.34 | | 3.07 | 0.512 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.2 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,520 | | 10.2 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 188 | | 1.02 | 0.0850 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.206 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.40 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 412 | | 10.2 | 2.96 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,590 | | 102 | 8.54 | 1 |
| 01667 | Sodium | 7440-23-5 | 123 | | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.68 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,260 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 42.8 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.1 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.86 | J | 5.12 | 0.860 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.150 | J | 0.410 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.205 | U | 0.205 | 0.0266 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.3 | | 0.410 | 0.0696 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.294 | | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0114 | J | 0.0176 | 0.0106 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471510**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87412 SDG#: PH188-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 6.90 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.0 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471510**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87412 SDG#: PH188-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 U | 1.03 | 0.0782 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0874 JBQ | 5.13 | 0.0584 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.13 U | 5.13 | 0.0324 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.13 U | 5.13 | 0.0331 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 5.13 U | 5.13 | 0.0320 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.118 JBQ | 5.13 | 0.0422 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.739 JB | 10.3 | 0.0364 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 U | 1.03 | 0.0526 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0598 JB | 5.13 | 0.0321 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0511 JBQ | 5.13 | 0.0313 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0742 JBQ | 5.13 | 0.0309 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0470 JBQ | 5.13 | 0.0286 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.13 U | 5.13 | 0.0338 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0341 JBQ | 5.13 | 0.0315 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0606 JBQ | 5.13 | 0.0130 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0309 JB | 5.13 | 0.0202 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.151 JBQ | 10.3 | 0.0755 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00232 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 69 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 62 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 65 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 73 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 81 | 28 - 143 |
| 13C12-1234789-HpCDF | 58 | 26 - 138 |
| 13C12-OCDF | 48 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471510**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87412 SDG#: PH188-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471510**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87412 SDG#: PH188-05*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 07:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/28/2014 23:42 | Marie D Beamenderfer | 22.98 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 15:37 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:37 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 08:53 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 02:34 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 23:01 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 16:56 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-874-SA5A-SB-12.0-13.0 Grab Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7471510**
**LL Group # 1475897**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:15 by RR

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:35

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

87412 SDG#: PH188-05*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:32 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:33 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:33 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:33 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:33 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:31 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14142162401B | 05/22/2014 20:29 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLF026 | Sample number(s): 7471504-7471507,7471509-7471510 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 84 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 95 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 88 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 114 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 112 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 80-119 | | |
| Batch number: 14142A94A | Sample number(s): 7471503 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 109 | 111 | 80-133 | 2 | 30 |
| Batch number: 14147B16A | Sample number(s): 7471505-7471507,7471509-7471510 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 88 | | 67-120 | | |
| Batch number: 141430011A | Sample number(s): 7471504-7471507,7471509-7471510 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 87 | 87 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 100 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 108 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141440030A | Sample number(s): 7471504-7471507,7471509-7471510 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 85 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 77 | | 60-115 | | |
| Batch number: 141440031A | Sample number(s): 7471504-7471507,7471509-7471510 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 85 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 85 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 84 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 81 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68 | | 60-115 | | |
| Batch number: 141410638002 | Sample number(s): 7471504-7471510 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 95 | | 85-120 | | |
| Batch number: 141470637002 | Sample number(s): 7471504-7471510 | | | | | | | | | |
| Aluminum | 9.28 | J | 40.0 | 7.21 | mg/kg | 110 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 0.858 | J | 10.0 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 12.8 | J | 20.0 | 3.34 | mg/kg | 106 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 107 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.36 | J | 10.0 | 0.220 | mg/kg | 104 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Zinc | 0.956 | J | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141470637002A | Sample number(s): 7471504-7471510 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 113 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 115 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 108 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141470637002B | Sample number(s): 7471504-7471510 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 112 | | 80-120 | | |
| Batch number: 14141039401A | Sample number(s): 7471504-7471505,7471508-7471510 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14142162401B | Sample number(s): 7471504-7471510 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14148003 | Sample number(s): 7471504-7471507,7471509-7471510 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0400 | ng/kg | 91 | | 67-158 | | |
| 12378-PeCDD | 0.0674 | J | 5.00 | 0.0286 | ng/kg | 97 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0192 | ng/kg | 98 | | 70-164 | | |
| 123678-HxCDD | 0.0322 | J | 5.00 | 0.0199 | ng/kg | 94 | | 76-134 | | |
| 123789-HxCDD | 0.0351 | J | 5.00 | 0.0195 | ng/kg | 93 | | 64-162 | | |
| 1234678-HpCDD | 0.104 | J | 5.00 | 0.0213 | ng/kg | 92 | | 70-140 | | |
| OCDD | 0.662 | J | 10.0 | 0.0258 | ng/kg | 92 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0272 | ng/kg | 104 | | 75-158 | | |
| 12378-PeCDF | 0.0961 | J | 5.00 | 0.0195 | ng/kg | 97 | | 80-134 | | |
| 23478-PeCDF | 0.0685 | J | 5.00 | 0.0194 | ng/kg | 97 | | 68-160 | | |
| 123478-HxCDF | 0.0887 | J | 5.00 | 0.0170 | ng/kg | 95 | | 72-134 | | |
| 123678-HxCDF | 0.0451 | J | 5.00 | 0.0160 | ng/kg | 95 | | 84-130 | | |
| 123789-HxCDF | 0.0531 | J | 5.00 | 0.0170 | ng/kg | 94 | | 78-130 | | |
| 234678-HxCDF | 0.0468 | J | 5.00 | 0.0165 | ng/kg | 97 | | 70-156 | | |
| 1234678-HpCDF | 0.0707 | J | 5.00 | 0.0102 | ng/kg | 92 | | 82-122 | | |
| 1234789-HpCDF | 0.0368 | J | 5.00 | 0.0171 | ng/kg | 92 | | 78-138 | | |
| OCDF | 0.0875 | J | 10.0 | 0.0344 | ng/kg | 94 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0870 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLF026 | Sample number(s): 7471504-7471507,7471509-7471510 UNSPK: 7471505 | | | | | | | | |
| Acenaphthene | 101 | 99 | 48-127 | 1 | 30 | | | | |
| Acenaphthylene | 99 | 102 | 60-128 | 3 | 30 | | | | |
| Anthracene | 99 | 103 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 107 | 112 | 44-143 | 5 | 30 | | | | |
| Benzo(a)pyrene | 95 | 96 | 49-137 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 106 | 102 | 26-142 | 4 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(e)pyrene | 85 | 86 | 63-111 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 89 | 92 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 92 | 94 | 49-144 | 3 | 30 | | | | |
| Butylbenzylphthalate | 110 | 112 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 114 | 109 | 52-147 | 4 | 30 | | | | |
| Chrysene | 92 | 96 | 43-141 | 4 | 30 | | | | |
| Dibenz(a,h)anthracene | 93 | 96 | 25-145 | 4 | 30 | | | | |
| Diethylphthalate | 80 | 83 | 66-140 | 5 | 30 | | | | |
| Dimethylphthalate | 87 | 89 | 70-123 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 123 | 121 | 48-164 | 1 | 30 | | | | |
| Fluoranthene | 94 | 106 | 38-153 | 11 | 30 | | | | |
| Fluorene | 98 | 100 | 57-130 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 98 | 95 | 26-139 | 3 | 30 | | | | |
| 1-Methylnaphthalene | 92 | 92 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 97 | 46-147 | 3 | 30 | | | | |
| Naphthalene | 93 | 97 | 52-136 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 89 | 87 | 39-134 | 1 | 30 | | | | |
| Di-n-octylphthalate | 121 | 119 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 93 | 101 | 50-137 | 8 | 30 | | | | |
| Pyrene | 83 | 96 | 26-143 | 14 | 30 | | | | |
| Batch number: 14147B16A | Sample number(s): 7471505-7471507,7471509-7471510 UNSPK: 7471505 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 76 | 79 | 69-123 | 1 | 30 | | | | |
| Batch number: 141430011A | Sample number(s): 7471504-7471507,7471509-7471510 UNSPK: 7471505 | | | | | | | | |
| PCB-1016 | 96 | 84 | 41-135 | 12 | 50 | | | | |
| PCB-1260 | 102 | 88 | 40-134 | 14 | 50 | | | | |
| Batch number: 141440030A | Sample number(s): 7471504-7471507,7471509-7471510 UNSPK: 7471505 | | | | | | | | |
| EFH (C12-C14) | 86 | 88 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 112 | 106 | 49-123 | 6 | 20 | | | | |
| EFH (C21-C30) | 91 | 42* | 49-123 | 26* | 20 | | | | |
| EFH (C30-C40) | 130* | 28* | 49-123 | 38* | 20 | | | | |
| EFH (C8-C11) | 76 | 77 | 49-123 | 1 | 20 | | | | |
| Batch number: 141440031A | Sample number(s): 7471504-7471507,7471509-7471510 UNSPK: 7471505 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 82 | 73 | 49-123 | 12 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 84 | 75 | 49-123 | 13 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 96 | 79 | 49-123 | 20 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 90 | 78 | 49-123 | 16 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 64 | 58 | 49-123 | 11 | 20 | | | | |
| Batch number: 141410638002 | Sample number(s): 7471504-7471510 UNSPK: 7471505 BKG: 7471505 | | | | | | | | |
| 3a Mercury 7471A | 107 | 96 | 65-135 | 11 | 20 | 0.0109 J | 0.0097 J | 12 (1) | 20 |
| Batch number: 141470637002 | Sample number(s): 7471504-7471510 UNSPK: 7471505 BKG: 7471505 | | | | | | | | |
| Aluminum | 372 (2) | 821 (2) | 75-125 | 6 | 20 | 15,100 | 13,200 | 13 | 20 |
| Antimony | 52* | 51* | 75-125 | 2 | 20 | 4.00 U | 4.00 U | 0 (1) | 20 |
| Arsenic | 96 | 96 | 75-125 | 2 | 20 | 4.11 | 3.09 J | 28* (1) | 20 |
| Barium | 35* | 37* | 75-125 | 2 | 20 | 230 | 94.1 | 84* | 20 |
| Beryllium | 101 | 102 | 75-125 | 3 | 20 | 0.562 J | 0.486 J | 15 (1) | 20 |
| Boron | 98 | 98 | 75-125 | 3 | 20 | 6.78 J | 4.93 J | 32* (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 97 | 97 | 75-125 | 3 | 20 | 0.549 J | 0.491 J | 11 (1) | 20 |
| Calcium | 149 (2) | 103 (2) | 75-125 | 5 | 20 | 2,920 | 2,520 | 15 | 20 |
| Chromium | 81 | 89 | 75-125 | 5 | 20 | 20.4 | 16.4 | 22* | 20 |
| Cobalt | 96 | 97 | 75-125 | 4 | 20 | 5.22 | 5.04 | 4 | 20 |
| Copper | 102 | 105 | 75-125 | 4 | 20 | 10.3 | 8.93 | 14 (1) | 20 |
| Iron | -2173 (2) | -1295 (2) | 75-125 | 5 | 20 | 18,600 | 17,400 | 7 | 20 |
| Lead | 98 | 93 | 75-125 | 2 | 20 | 6.89 | 5.48 | 23* (1) | 20 |
| Lithium | 99 | 101 | 75-125 | 4 | 20 | 21.7 | 20.3 | 7 | 20 |
| Magnesium | -196 (2) | -75 (2) | 75-125 | 6 | 20 | 4,220 | 3,840 | 9 | 20 |
| Manganese | 156 (2) | 119 (2) | 75-125 | 5 | 20 | 291 | 294 | 1 | 20 |
| Molybdenum | 95 | 96 | 75-125 | 3 | 20 | 0.441 J | 0.329 J | 29* (1) | 20 |
| Nickel | 96 | 97 | 75-125 | 4 | 20 | 11.0 | 10.8 | 3 | 20 |
| Phosphorus | 106 | 38* | 75-125 | 15 | 20 | 372 | 354 | 5 | 20 |
| Potassium | 108 | 109 | 75-125 | 1 | 20 | 3,220 | 3,070 | 5 | 20 |
| Sodium | 95 | 96 | 75-125 | 4 | 20 | 111 | 102 | 8 (1) | 20 |
| Tin | 90 | 90 | 75-125 | 3 | 20 | 2.39 J | 2.23 J | 7 (1) | 20 |
| Titanium | 150 (2) | 258 (2) | 75-125 | 9 | 20 | 1,070 | 994 | 8 | 20 |
| Vanadium | 97 | 102 | 75-125 | 5 | 20 | 34.9 | 30.6 | 13 | 20 |
| Zinc | 93 | 89 | 75-125 | 1 | 20 | 56.3 | 52.0 | 8 | 20 |
| Zirconium | 98 | 98 | 75-125 | 4 | 20 | 3.99 J | 4.08 J | 2 (1) | 20 |
| Batch number: 141470637002A | Sample number(s): 7471504-7471510 UNSPK: 7471505 BKG: 7471505 | | | | | | | | |
| Silver | 105 | 102 | 75-125 | 0 | 20 | 0.0276 J | 0.0297 J | 8 (1) | 20 |
| Strontium | 106 | 92 | 75-125 | 3 | 20 | 22.8 | 19.7 | 15 | 20 |
| Thallium | 120 | 112 | 75-125 | 2 | 20 | 0.256 | 0.252 | 1 (1) | 20 |
| Batch number: 141470637002B | Sample number(s): 7471504-7471510 UNSPK: 7471505 BKG: 7471505 | | | | | | | | |
| Selenium | 99 | 99 | 75-125 | 3 | 20 | 0.137 J | 0.118 J | 15 (1) | 20 |
| Batch number: 14141039401A | Sample number(s): 7471504-7471505,7471508-7471510 BKG: 7471505 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.00 | 6.96 | 1 | 3 |
| Batch number: 14142162401B | Sample number(s): 7471504-7471510 BKG: 7471505 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.0 | 7.9 | 12 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 7.0 | 7.9 | 12 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 7.0 | 7.9 | 12 | 20 |
| Batch number: 14148003 | Sample number(s): 7471504-7471507,7471509-7471510 UNSPK: 7471505 | | | | | | | | |
| 2378-TCDD | 93 | 93 | 40-135 | 0 | 20 | | | | |
| 12378-PeCDD | 94 | 95 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 97 | 97 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDD | 94 | 93 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 95 | 94 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 94 | 93 | 40-135 | 1 | 20 | | | | |
| OCDD | 102 | 92 | 40-135 | 10 | 20 | | | | |
| 2378-TCDF | 100 | 99 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 96 | 99 | 40-135 | 3 | 20 | | | | |
| 23478-PeCDF | 98 | 98 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 96 | 96 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 95 | 94 | 40-135 | 1 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 123789-HxCDF | 94 | 96 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 98 | 97 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 93 | 93 | 40-135 | 0 | 20 | | | | |
| 1234789-HpCDF | 94 | 93 | 40-135 | 1 | 20 | | | | |
| OCDF | 93 | 93 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14142SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7471504 | 88 | 99 | 82 |
| 7471505 | 93 | 98 | 83 |
| 7471506 | 90 | 100 | 83 |
| 7471507 | 89 | 99 | 82 |
| 7471509 | 89 | 96 | 82 |
| 7471510 | 89 | 101 | 82 |
| Blank | 92 | 106 | 85 |
| LCS | 96 | 110 | 88 |
| MS | 90 | 100 | 83 |
| MSD | 89 | 99 | 82 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14142A94A

| | Trifluorotoluene-F |
|---|---|
| 7471503 | 86 |
| Blank | 86 |
| LCS | 97 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14147B16A

| | Trifluorotoluene-F |
|---|---|
| 7471505 | 79 |
| 7471506 | 90 |
| 7471507 | 83 |
| 7471509 | 88 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7471510 | 83 | |
| Blank | 98 | |
| LCS | 101 | |
| MS | 90 | |
| MSD | 83 | |
| Limits: | 50-142 | |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141430011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7471504 | 101 | 107 |
| 7471505 | 91 | 94 |
| 7471506 | 104 | 114 |
| 7471507 | 95 | 96 |
| 7471509 | 99 | 104 |
| 7471510 | 97 | 104 |
| Blank | 104 | 108 |
| LCS | 104 | 117 |
| LCSD | 102 | 112 |
| MS | 104 | 114 |
| MSD | 95 | 96 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141440030A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7471504 | 75 | 91 |
| 7471505 | 75 | 88 |
| 7471506 | 75 | 85 |
| 7471507 | 77 | 88 |
| 7471509 | 74 | 88 |
| 7471510 | 79 | 92 |
| Blank | 79 | 91 |
| LCS | 80 | 94 |
| MS | 75 | 85 |
| MSD | 77 | 88 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141440031A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7471504 | 61 | 74 |
| 7471505 | 69 | 77 |
| 7471506 | 73 | 84 |
| 7471507 | 65 | 75 |
| 7471509 | 61 | 69 |
| 7471510 | 60 | 72 |
| Blank | 79 | 90 |
| LCS | 77 | 87 |
| MS | 73 | 84 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475897
Reported: 06/03/14 at 04:35 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| MSD | 65 | 75 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14148003

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7471504 | 61 | 66 | 71 | 71 | 70 | 73 |
| 7471505 | 58 | 60 | 64 | 62 | 63 | 60 |
| 7471506 | 82 | 83 | 88 | 85 | 86 | 84 |
| 7471507 | 70 | 72 | 79 | 79 | 79 | 74 |
| 7471509 | 65 | 69 | 72 | 72 | 73 | 69 |
| 7471510 | 69 | 70 | 78 | 76 | 76 | 72 |
| Blank | 81 | 87 | 91 | 92 | 92 | 89 |
| MS | 82 | 83 | 88 | 85 | 86 | 84 |
| MSD | 70 | 72 | 79 | 79 | 79 | 74 |
| OPR | 66 | 73 | 80 | 79 | 80 | 76 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7471504 | 67 | 56 | 64 | 59 | 59 | 66 |
| 7471505 | 51 | 54 | 62 | 53 | 54 | 59 |
| 7471506 | 72 | 77 | 82 | 75 | 76 | 82 |
| 7471507 | 63 | 66 | 71 | 66 | 69 | 74 |
| 7471509 | 58 | 60 | 68 | 62 | 64 | 68 |
| 7471510 | 62 | 64 | 69 | 65 | 68 | 73 |
| Blank | 76 | 76 | 85 | 80 | 81 | 86 |
| MS | 72 | 77 | 82 | 75 | 76 | 82 |
| MSD | 63 | 66 | 71 | 66 | 69 | 74 |
| OPR | 69 | 57 | 69 | 63 | 63 | 71 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7471504 | 62 | 58 | 81 | 56 | 50 |
| 7471505 | 56 | 62 | 69 | 46 | 38 |
| 7471506 | 78 | 83 | 91 | 65 | 56 |
| 7471507 | 71 | 71 | 81 | 59 | 49 |
| 7471509 | 64 | 65 | 78 | 52 | 43 |
| 7471510 | 69 | 71 | 81 | 58 | 48 |
| Blank | 83 | 87 | 100 | 69 | 58 |
| MS | 78 | 83 | 91 | 65 | 56 |
| MSD | 71 | 71 | 81 | 59 | 49 |
| OPR | 66 | 64 | 87 | 54 | 46 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/20/2014

CarrierName: FedEx

AirbillNo: 7700 4439 7602

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

A-13013 G-1475897 S-747503-10

COC No: 20140520-07

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB1-052014 | 5/20/14 08:00 | WQ | HCl | 6 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | X | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-874-SA5A-SB-0.0-0.5 | 5/20/14 08:20 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | X | | | | SMSD | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-874-SA5A-SB-4.0-5.0MS | 5/20/14 09:15 | SO | None | 6 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | MSMSD |
| FDG2-SL-874-SA5A-SB-4.0-5.0MS | 5/20/14 09:15 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | MSMSD |
| FDG2-SL-1174-SA5A-SB-4.0-5.0 | 5/20/14 09:25 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | For all EFH, silica gel |
| FDG2-SL-1174-SA5A-SB-4.0-5.0 | 5/20/14 09:25 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | clean up required on half |
| FDG2-SL-874-SA5A-SB-12.0-13.0 | 5/20/14 10:15 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | | the extract. Analyze both |
| FDG2-SL-874-SA5A-SB-12.0-13.0 | 5/20/14 10:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | extracts for EFH. |

Special Instructions:

**Sampler:** Randy Roberts

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Rm/Rm | 5.21.14 | 950 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15127

Group Number(s): 1475897

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/21/2014 9:50 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | Yes | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 11:13 on 05/21/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.3 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.2 | DT | Wet | Y | Bagged | N | N |

### Container Quantity Discrepancy Details: SSFL

| Sample ID on COC | Container Qty. Received | Container Qty. on COC | Comments |
|---|---|---|---|
| FDG2-SL-874-SA5A-0.0-0.5 | 3 | 2 | rec 1 4oz jar & 2 sleeves |

General Comments: TB1 rec 3 vials



2425 New Holland Pike
Lancaster, PA 17605-2425



T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 03, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/21/2014
Group Number: 1475905
SDG: PH189
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB3-052014 Water | 7471531 |
| SL-611-SA8-TR-0.5 Grab Soil | 7471532 |
| SL-611-SA8-TR-5.0 Grab Soil | 7471533 |
| SL-611-SA8-TR-10.5 Grab Soil | 7471534 |
| SL-570-SA6-TR-6.0 Grab Soil | 7471535 |
| SL-570-SA6-TR-2.0 Grab Soil | 7471536 |
| SL-570-SA6-TR-0.5 Grab Soil | 7471537 |
| SL-569-SA6-TR-2.5 Grab Soil | 7471538 |
| SL-569-SA6-TR-0.5 Grab Soil | 7471539 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB3-052014 Water**
**SSFL Phase 3 Subarea 8/6**

**LL Sample # WW 7471531**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 08:00

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

20TB3 SDG#: PH189-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 15:01 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 15:01 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-611-SA8-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7471532**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61105 SDG#: PH189-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.85 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.72 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.2 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.3 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.1 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 11 | J | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.5 | J | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.90 | J | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.3 | J | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.3 | J | 1.8 | 0.71 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 99 | | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 30 | | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 42 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 56 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471532**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61105 SDG#: PH189-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 29 | | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 30 | | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,900 | | 42.1 | 7.58 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.21 | U | 4.21 | 0.778 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.28 | J | 4.21 | 0.736 | 1 |
| 06946 | Barium | 7440-39-3 | 90.0 | | 1.05 | 0.0347 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.714 | J | 1.05 | 0.0705 | 1 |
| 07914 | Boron | 7440-42-8 | 18.0 | | 10.5 | 0.884 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.05 | U | 1.05 | 0.0799 | 1 |
| 01650 | Calcium | 7440-70-2 | 53,400 | | 21.0 | 3.51 | 1 |
| 06951 | Chromium | 7440-47-3 | 30.9 | | 3.16 | 0.168 | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.21 | | 1.05 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 20.5 | | 2.10 | 0.305 | 1 |
| 01654 | Iron | 7439-89-6 | 26,700 | | 84.1 | 7.62 | 2 |
| 06955 | Lead | 7439-92-1 | 17.2 | | 3.16 | 0.526 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.9 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,980 | | 10.5 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 403 | | 1.05 | 0.0873 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.10 | U | 2.10 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 17.7 | | 2.10 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 669 | | 10.5 | 3.04 | 1 |
| 01662 | Potassium | 7440-09-7 | 6,150 | | 105 | 8.77 | 1 |
| 01667 | Sodium | 7440-23-5 | 112 | | 105 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.09 | J | 10.5 | 0.231 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,020 | | 1.05 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 54.4 | | 1.05 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 78.3 | | 4.21 | 0.210 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.67 | | 5.26 | 0.884 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.287 | J | 0.421 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0335 | J | 0.210 | 0.0273 | 2 |
| 06144 | Strontium | 7440-24-6 | 108 | | 1.05 | 0.179 | 5 |
| 06145 | Thallium | 7440-28-0 | 0.311 | | 0.210 | 0.0316 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0197 | | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.95 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471532**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61105 SDG#: PH189-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.7 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471532**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61105 SDG#: PH189-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.07 | U | 1.07 | 0.0902 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.34 | U | 5.34 | 0.116 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0787 | JQ | 5.34 | 0.0564 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.214 | JBQ | 5.34 | 0.0583 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.182 | JBQ | 5.34 | 0.0547 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.98 | JB | 5.34 | 0.109 | 1 |
| 11031 | OCDD | 3268-87-9 | 29.3 | B | 10.7 | 0.0656 | 1 |
| 11650 | 2378-TCDF-Conf | 51207-31-9 | 1.21 | C | 1.07 | 0.147 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 14.8 | B | 5.34 | 0.0803 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.958 | JBQ | 5.34 | 0.0865 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.416 | JB | 5.34 | 0.0812 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.16 | JB | 5.34 | 0.0715 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.34 | U | 5.34 | 0.0965 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.415 | JB | 5.34 | 0.0775 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.792 | JBQ | 5.34 | 0.0329 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.122 | JBQ | 5.34 | 0.0593 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.51 | JBQ | 10.7 | 0.112 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.802 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDF-Conf | 70 | 24 - 169 |
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 59 | 17 - 157 |
| 13C12-12378-PeCDF | 74 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 68 | 26 - 152 |
| 13C12-123678-HxCDF | 75 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 54 | 26 - 138 |
| 13C12-OCDF | 42 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471532**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61105 SDG#: PH189-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471532**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61105 SDG#: PH189-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 07:48 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 09:11 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 04:23 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 23:22 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 17:53 | Joseph D Anderson | 1 |
| 11650 | Dioxins/Furans in Solids-Conf | EPA 1613B October 1994 | 1 | 14148003 | 05/31/2014 21:03 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:46 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471532**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61105 SDG#: PH189-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:41 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:54 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:54 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:09 | Choon Y Tian | 5 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:54 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:33 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471533**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61150 SDG#: PH189-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.73 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 24.32 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471533**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61150 SDG#: PH189-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 6.1 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 24,700 | | 42.2 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.22 | U | 4.22 | 0.781 | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.96 | J | 4.22 | 0.739 | 1 |
| 06946 | Barium | 7440-39-3 | 112 | | 1.06 | 0.0348 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.837 | J | 1.06 | 0.0707 | 1 |
| 07914 | Boron | 7440-42-8 | 15.4 | | 10.6 | 0.887 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0802 | 1 |
| 01650 | Calcium | 7440-70-2 | 30,500 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 32.9 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.63 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 21.0 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 30,700 | | 84.5 | 7.64 | 2 |
| 06955 | Lead | 7439-92-1 | 12.8 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.8 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,260 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 411 | | 1.06 | 0.0876 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.11 | U | 2.11 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 18.9 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 536 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 5,590 | | 106 | 8.81 | 1 |
| 01667 | Sodium | 7440-23-5 | 93.4 | J | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.88 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 1.06 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 60.1 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 75.9 | | 4.22 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.73 | | 5.28 | 0.887 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.255 | J | 0.422 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0429 | J | 0.211 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 65.1 | | 0.422 | 0.0718 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.363 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0120 | J | 0.0177 | 0.0106 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471533**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61150 SDG#: PH189-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 7.93 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.8 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471533**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61150 SDG#: PH189-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0883 JQ | 1.07 | 0.0814 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0680 JBQ | 5.33 | 0.0514 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.33 U | 5.33 | 0.0367 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.33 U | 5.33 | 0.0356 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0432 JB | 5.33 | 0.0356 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.188 JBQ | 5.33 | 0.0397 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.976 JB | 10.7 | 0.0399 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.07 U | 1.07 | 0.0637 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.241 JBQ | 5.33 | 0.0335 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0352 JB | 5.33 | 0.0346 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 5.33 U | 5.33 | 0.0300 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0718 JBQ | 5.33 | 0.0252 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0558 JBQ | 5.33 | 0.0310 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0521 JBQ | 5.33 | 0.0266 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0443 JB | 5.33 | 0.0118 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.33 U | 5.33 | 0.0226 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.215 JB | 10.7 | 0.0817 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0157 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 76 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 63 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 74 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 66 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 68 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 55 | 26 - 138 |
| 13C12-OCDF | 44 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471533**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61150 SDG#: PH189-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471533**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by BC

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61150 SDG#: PH189-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 08:20 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 00:20 | Marie D Beamenderfer | 24.32 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 15:58 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:58 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 09:29 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 04:44 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/30/2014 23:44 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 18:49 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:50 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471533**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61150 SDG#: PH189-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:45 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:57 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:57 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:57 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:57 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:35 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-10.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471534**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:20 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61110 SDG#: PH189-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.74 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.28 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 11 | J | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 9.7 | J | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-10.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471534**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:20 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61110 SDG#: PH189-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 8.1 | | 5.6 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 11 | 4.5 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.5 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 27,100 | | 43.9 | 7.92 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.39 | U | 4.39 | 0.812 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.45 | J | 4.39 | 0.769 | 1 |
| 06946 | Barium | 7440-39-3 | 110 | | 1.10 | 0.0362 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.878 | J | 1.10 | 0.0736 | 1 |
| 07914 | Boron | 7440-42-8 | 16.3 | | 11.0 | 0.922 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0834 | 1 |
| 01650 | Calcium | 7440-70-2 | 23,500 | | 22.0 | 3.67 | 1 |
| 06951 | Chromium | 7440-47-3 | 35.9 | | 3.29 | 0.176 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.55 | | 1.10 | 0.109 | 1 |
| 06953 | Copper | 7440-50-8 | 20.6 | | 2.20 | 0.318 | 1 |
| 01654 | Iron | 7439-89-6 | 31,800 | | 87.8 | 7.95 | 2 |
| 06955 | Lead | 7439-92-1 | 13.3 | | 3.29 | 0.549 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.7 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,670 | | 11.0 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 392 | | 1.10 | 0.0911 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.20 | U | 2.20 | 0.187 | 1 |
| 06961 | Nickel | 7440-02-0 | 19.2 | | 2.20 | 0.143 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 370 | | 11.0 | 3.17 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,280 | | 110 | 9.16 | 1 |
| 01667 | Sodium | 7440-23-5 | 116 | | 110 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 3.33 | J | 11.0 | 0.242 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 1.10 | 0.187 | 1 |
| 06971 | Vanadium | 7440-62-2 | 66.2 | | 1.10 | 0.143 | 1 |
| 06972 | Zinc | 7440-66-6 | 75.0 | | 4.39 | 0.220 | 1 |
| 10146 | Zirconium | 7440-67-7 | 6.78 | | 5.49 | 0.922 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.194 | J | 0.439 | 0.110 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0414 | J | 0.220 | 0.0285 | 2 |
| 06144 | Strontium | 7440-24-6 | 67.8 | | 0.439 | 0.0747 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.394 | | 0.220 | 0.0329 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0124 | J | 0.0182 | 0.0109 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-10.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471534**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:20 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61110 SDG#: PH189-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 8.06 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 10.7 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-611-SA8-TR-10.5 Grab Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7471534**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:20 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61110 SDG#: PH189-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0778 JQ | 1.08 | 0.0715 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.249 JBQ | 5.39 | 0.0667 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.100 J | 5.39 | 0.0321 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0832 JBQ | 5.39 | 0.0325 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0692 JBQ | 5.39 | 0.0342 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.377 JBQ | 5.39 | 0.0491 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.16 JB | 10.8 | 0.0450 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.232 J | 1.08 | 0.0643 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.95 JB | 5.39 | 0.0409 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.237 JB | 5.39 | 0.0421 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.151 JBQ | 5.39 | 0.0348 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.227 JBQ | 5.39 | 0.0296 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0685 JBQ | 5.39 | 0.0366 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0789 JB | 5.39 | 0.0319 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.157 JB | 5.39 | 0.0137 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0432 JBQ | 5.39 | 0.0245 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.440 JB | 10.8 | 0.0828 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.174 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 76 | 23 - 140 |
| 13C12-OCDD | 62 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 74 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 55 | 26 - 138 |
| 13C12-OCDF | 44 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-10.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471534**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:20 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61110 SDG#: PH189-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-10.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471534**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61110 SDG#: PH189-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 08:52 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 00:57 | Marie D Beamenderfer | 23.28 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 15:56 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:57 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 09:48 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 05:06 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/31/2014 00:05 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 19:46 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/29/2014 07:54 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-611-SA8-TR-10.5 Grab Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7471534**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 09:20 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61110 SDG#: PH189-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:49 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 06:59 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:59 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:59 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 06:59 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:37 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-6.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471535**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:43 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57060 SDG#: PH189-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.95 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-570-SA6-TR-6.0 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471535**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:43 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57060 SDG#: PH189-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,900 | | 42.3 | 7.62 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.23 | U | 4.23 | 0.782 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.03 | J | 4.23 | 0.740 | 1 |
| 06946 | Barium | 7440-39-3 | 111 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.887 | J | 1.06 | 0.0708 | 1 |
| 07914 | Boron | 7440-42-8 | 8.53 | J | 10.6 | 0.887 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0803 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,550 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.1 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.11 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 12.2 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 25,600 | | 42.3 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 9.18 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 30.2 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,120 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 249 | | 1.06 | 0.0877 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.322 | J | 2.11 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.1 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 193 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,680 | | 106 | 8.81 | 1 |
| 01667 | Sodium | 7440-23-5 | 116 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.64 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,290 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 49.6 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 52.5 | | 4.23 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.41 | J | 5.28 | 0.887 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.423 | U | 0.423 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0847 | J | 0.211 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 28.4 | | 0.423 | 0.0718 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.275 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0189 | | 0.0176 | 0.0105 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-570-SA6-TR-6.0 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471535**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:43 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57060 SDG#: PH189-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 6.54 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.2 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-6.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471535**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:43 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57060 SDG#: PH189-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.06 U | 1.06 | 0.0769 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.117 JBQ | 5.30 | 0.0494 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.30 U | 5.30 | 0.0297 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.30 U | 5.30 | 0.0303 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0334 JBQ | 5.30 | 0.0302 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.161 JB | 5.30 | 0.0424 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.93 JB | 10.6 | 0.0363 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0531 JQ | 1.06 | 0.0489 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.139 JB | 5.30 | 0.0287 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.107 JBQ | 5.30 | 0.0296 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0647 JBQ | 5.30 | 0.0262 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0383 JBQ | 5.30 | 0.0231 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.30 U | 5.30 | 0.0320 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.30 U | 5.30 | 0.0250 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0279 JB | 5.30 | 0.0132 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0246 JBQ | 5.30 | 0.0238 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.132 JBQ | 10.6 | 0.0711 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00665 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 71 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 77 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 71 | 23 - 140 |
| 13C12-OCDD | 60 | 17 - 157 |
| 13C12-2378-TCDF | 66 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 75 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 53 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-6.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471535**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:43 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57060 SDG#: PH189-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-6.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471535**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:43 by BC

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57060 SDG#: PH189-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 09:24 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 01:35 | Marie D Beamenderfer | 23.95 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 15:35 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:35 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 10:06 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 02:56 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/31/2014 00:27 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 20:42 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-6.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471535**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:43 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57060 SDG#: PH189-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:53 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:01 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:01 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:01 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:01 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:39 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-2.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471536**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:00 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57020 SDG#: PH189-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.94 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-570-SA6-TR-2.0 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471536**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:00 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57020 SDG#: PH189-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,500 | | 40.5 | 7.31 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.05 | U | 4.05 | 0.750 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.24 | J | 4.05 | 0.709 | 1 |
| 06946 | Barium | 7440-39-3 | 118 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.628 | J | 1.01 | 0.0679 | 1 |
| 07914 | Boron | 7440-42-8 | 8.13 | J | 10.1 | 0.851 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.01 | U | 1.01 | 0.0770 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,110 | | 20.3 | 3.38 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.3 | | 3.04 | 0.162 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.76 | | 1.01 | 0.100 | 1 |
| 06953 | Copper | 7440-50-8 | 13.9 | | 2.03 | 0.294 | 1 |
| 01654 | Iron | 7439-89-6 | 19,700 | | 40.5 | 3.67 | 1 |
| 06955 | Lead | 7439-92-1 | 7.33 | | 3.04 | 0.507 | 1 |
| 01656 | Lithium | 7439-93-2 | 21.4 | | 4.1 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,050 | | 10.1 | 1.69 | 1 |
| 06958 | Manganese | 7439-96-5 | 440 | | 1.01 | 0.0841 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.447 | J | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.4 | | 2.03 | 0.132 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 360 | | 10.1 | 2.93 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,700 | | 101 | 8.45 | 1 |
| 01667 | Sodium | 7440-23-5 | 79.9 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.07 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,110 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.6 | | 1.01 | 0.132 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.4 | | 4.05 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.15 | J | 5.07 | 0.851 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.126 | J | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0513 | J | 0.203 | 0.0263 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.2 | | 0.405 | 0.0689 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.362 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0172 | U | 0.0172 | 0.0103 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-570-SA6-TR-2.0 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471536**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:00 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57020 SDG#: PH189-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.22 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.1 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-2.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471536**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:00 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57020 SDG#: PH189-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0805 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.14 | U | 5.14 | 0.0575 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.14 | U | 5.14 | 0.0360 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.131 | JB | 5.14 | 0.0360 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.183 | JBQ | 5.14 | 0.0341 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.343 | JBQ | 5.14 | 0.0468 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.52 | JB | 10.3 | 0.0443 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0586 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0597 | JBQ | 5.14 | 0.0320 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0321 | JBQ | 5.14 | 0.0315 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0398 | JB | 5.14 | 0.0311 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.14 | U | 5.14 | 0.0288 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.238 | JBQ | 5.14 | 0.0318 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0393 | JBQ | 5.14 | 0.0299 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0639 | JBQ | 5.14 | 0.0134 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0366 | JBQ | 5.14 | 0.0239 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.280 | JBQ | 10.3 | 0.0791 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0184 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 68 | 25 - 164 |
| 13C12-12378-PeCDD | 68 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 72 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 69 | 23 - 140 |
| 13C12-OCDD | 59 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 62 | 21 - 178 |
| 13C12-123478-HxCDF | 65 | 26 - 152 |
| 13C12-123678-HxCDF | 71 | 26 - 123 |
| 13C12-234678-HxCDF | 66 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 82 | 28 - 143 |
| 13C12-1234789-HpCDF | 52 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-2.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471536**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:00 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57020 SDG#: PH189-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-2.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471536**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:00 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57020 SDG#: PH189-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 09:56 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 02:13 | Marie D Beamenderfer | 22.94 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 15:52 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:53 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 10:25 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 03:39 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/31/2014 00:49 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 21:39 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-2.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471536**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 13:00 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57020 SDG#: PH189-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 09:57 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:04 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:04 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:04 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:04 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:46 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401A | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-570-SA6-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471537**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 12:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57005 SDG#: PH189-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.5 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 19 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471537**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 12:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57005 SDG#: PH189-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,700 | | 41.3 | 7.44 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.13 | U | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.22 | J | 4.13 | 0.722 | 1 |
| 06946 | Barium | 7440-39-3 | 99.3 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.571 | J | 1.03 | 0.0691 | 1 |
| 07914 | Boron | 7440-42-8 | 8.14 | J | 10.3 | 0.867 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0784 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,760 | | 20.6 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.7 | | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.79 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 12.9 | | 2.06 | 0.299 | 1 |
| 01654 | Iron | 7439-89-6 | 20,300 | | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 8.41 | | 3.10 | 0.516 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.2 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,730 | | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 324 | | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.243 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.1 | | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 496 | | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,610 | | 103 | 8.61 | 1 |
| 01667 | Sodium | 7440-23-5 | 78.9 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 3.01 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,090 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.5 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.8 | | 4.13 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.53 | J | 5.16 | 0.867 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.154 | J | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0617 | J | 0.206 | 0.0268 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.5 | | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.301 | | 0.206 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0155 | J | 0.0166 | 0.010 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.34 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471537**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 12:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57005 SDG#: PH189-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.1 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-570-SA6-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471537**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 12:10 by BC

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57005 SDG#: PH189-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0752 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.177 | JB | 5.10 | 0.0508 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.188 | J | 5.10 | 0.0502 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.313 | JBQ | 5.10 | 0.0494 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.507 | JBQ | 5.10 | 0.0485 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 6.34 | B | 5.10 | 0.0673 | 1 |
| 11031 | OCDD | 3268-87-9 | 118 | B | 10.2 | 0.0577 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0700 | JQ | 1.02 | 0.0594 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.135 | JB | 5.10 | 0.0285 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0683 | JBQ | 5.10 | 0.0288 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0778 | JBQ | 5.10 | 0.0342 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.101 | JB | 5.10 | 0.0311 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.141 | JB | 5.10 | 0.0352 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0900 | JBQ | 5.10 | 0.0322 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.511 | JB | 5.10 | 0.0196 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.10 | U | 5.10 | 0.0358 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.71 | JB | 10.2 | 0.0796 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.329 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 63 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 76 | 24 - 185 |
| 13C12-23478-PeCDF | 66 | 21 - 178 |
| 13C12-123478-HxCDF | 70 | 26 - 152 |
| 13C12-123678-HxCDF | 77 | 26 - 123 |
| 13C12-234678-HxCDF | 72 | 28 - 136 |
| 13C12-123789-HxCDF | 76 | 29 - 147 |
| 13C12-1234678-HpCDF | 91 | 28 - 143 |
| 13C12-1234789-HpCDF | 57 | 26 - 138 |
| 13C12-OCDF | 46 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471537**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 12:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57005 SDG#: PH189-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471537**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 12:10 by BC

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57005 SDG#: PH189-07

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 10:28 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 11:57 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 07:37 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/31/2014 01:10 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 22:35 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-570-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471537**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 12:10 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57005 SDG#: PH189-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:01 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:06 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:06 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:06 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:06 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:48 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401B | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-2.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471538**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56925 SDG#: PH189-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 0.9 | U | 0.9 | 0.2 | 21.66 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-2.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471538**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56925 SDG#: PH189-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,000 | | 41.1 | 7.40 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.759 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.83 | J | 4.11 | 0.718 | 1 |
| 06946 | Barium | 7440-39-3 | 95.9 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.817 | J | 1.03 | 0.0688 | 1 |
| 07914 | Boron | 7440-42-8 | 7.65 | J | 10.3 | 0.862 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0780 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,120 | | 20.5 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.6 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.67 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 9.78 | | 2.05 | 0.298 | 1 |
| 01654 | Iron | 7439-89-6 | 21,600 | | 41.1 | 3.72 | 1 |
| 06955 | Lead | 7439-92-1 | 8.23 | | 3.08 | 0.513 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.9 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,430 | | 10.3 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 268 | | 1.03 | 0.0852 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.467 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.2 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 212 | | 10.3 | 2.97 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,200 | | 103 | 8.56 | 1 |
| 01667 | Sodium | 7440-23-5 | 90.7 | J | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 3.36 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,120 | | 1.03 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 42.3 | | 1.03 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 46.0 | | 4.11 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.75 | J | 5.13 | 0.862 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.155 | J | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0509 | J | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.6 | | 0.411 | 0.0698 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.246 | | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0159 | J | 0.0170 | 0.0102 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-2.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471538**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56925 SDG#: PH189-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 6.17 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.4 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-569-SA6-TR-2.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471538**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56925 SDG#: PH189-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0764 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.12 | U | 5.12 | 0.0495 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.12 | U | 5.12 | 0.0296 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0478 | JBQ | 5.12 | 0.0299 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0506 | JB | 5.12 | 0.0286 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.143 | JB | 5.12 | 0.0330 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.19 | JB | 10.2 | 0.0357 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 | U | 1.02 | 0.0524 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0831 | JBQ | 5.12 | 0.0292 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0484 | JBQ | 5.12 | 0.0285 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0574 | JBQ | 5.12 | 0.0264 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0568 | JB | 5.12 | 0.0233 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0814 | JBQ | 5.12 | 0.0258 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0263 | JBQ | 5.12 | 0.0246 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0497 | JBQ | 5.12 | 0.0120 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0285 | JBQ | 5.12 | 0.0206 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.193 | JBQ | 10.2 | 0.0724 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0125 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 67 | 25 - 181 |
| 13C12-123478-HxCDD | 71 | 32 - 141 |
| 13C12-123678-HxCDD | 72 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 71 | 23 - 140 |
| 13C12-OCDD | 57 | 17 - 157 |
| 13C12-2378-TCDF | 61 | 24 - 169 |
| 13C12-12378-PeCDF | 67 | 24 - 185 |
| 13C12-23478-PeCDF | 61 | 21 - 178 |
| 13C12-123478-HxCDF | 64 | 26 - 152 |
| 13C12-123678-HxCDF | 69 | 26 - 123 |
| 13C12-234678-HxCDF | 66 | 28 - 136 |
| 13C12-123789-HxCDF | 73 | 29 - 147 |
| 13C12-1234678-HpCDF | 83 | 28 - 143 |
| 13C12-1234789-HpCDF | 54 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-2.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471538**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56925 SDG#: PH189-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-2.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471538**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56925 SDG#: PH189-08

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 11:00 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 06:00 | Marie D Beamenderfer | 21.66 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414134570 | 05/21/2014 16:02 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414134570 | 05/21/2014 15:50 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 12:15 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 03:18 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/31/2014 01:32 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/30/2014 23:32 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-2.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471538**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 11:15 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56925 SDG#: PH189-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:05 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:16 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:16 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:16 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:16 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:50 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401B | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-569-SA6-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471539**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:58 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56905 SDG#: PH189-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | mg/kg | | mg/kg | mg/kg | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471539**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:58 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56905 SDG#: PH189-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,200 | | 41.0 | 7.39 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.758 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.20 | J | 4.10 | 0.717 | 1 |
| 06946 | Barium | 7440-39-3 | 79.1 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.474 | J | 1.02 | 0.0686 | 1 |
| 07914 | Boron | 7440-42-8 | 7.06 | J | 10.2 | 0.861 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.02 | U | 1.02 | 0.0779 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,170 | | 20.5 | 3.42 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.0 | | 3.07 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.08 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 10.7 | | 2.05 | 0.297 | 1 |
| 01654 | Iron | 7439-89-6 | 19,600 | | 41.0 | 3.71 | 1 |
| 06955 | Lead | 7439-92-1 | 7.36 | | 3.07 | 0.512 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.9 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,430 | | 10.2 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 295 | | 1.02 | 0.0850 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.05 | U | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.63 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 413 | | 10.2 | 2.96 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,130 | | 102 | 8.55 | 1 |
| 01667 | Sodium | 7440-23-5 | 89.4 | J | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 3.22 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.7 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.2 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.89 | J | 5.12 | 0.861 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.410 | U | 0.410 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.205 | U | 0.205 | 0.0266 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.0 | | 0.410 | 0.0697 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.196 | J | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0170 | U | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.43 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471539**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:58 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56905 SDG#: PH189-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.4 | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-569-SA6-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7471539**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:58 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56905 SDG#: PH189-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 U | 1.01 | 0.0636 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0527 JBQ | 5.06 | 0.0458 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0631 JQ | 5.06 | 0.0386 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0884 JBQ | 5.06 | 0.0391 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.212 JBQ | 5.06 | 0.0384 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.77 JB | 5.06 | 0.0639 | 1 |
| 11031 | OCDD | 3268-87-9 | 28.6 B | 10.1 | 0.0432 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.01 U | 1.01 | 0.0600 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.107 JBQ | 5.06 | 0.0304 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0528 JBQ | 5.06 | 0.0323 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.102 JBQ | 5.06 | 0.0318 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0557 JBQ | 5.06 | 0.0265 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0756 JBQ | 5.06 | 0.0354 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0336 JBQ | 5.06 | 0.0304 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.144 JB | 5.06 | 0.0122 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.06 U | 5.06 | 0.0253 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.510 JBQ | 10.1 | 0.0837 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0277 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 66 | 25 - 164 |
| 13C12-12378-PeCDD | 69 | 25 - 181 |
| 13C12-123478-HxCDD | 75 | 32 - 141 |
| 13C12-123678-HxCDD | 72 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 63 | 17 - 157 |
| 13C12-2378-TCDF | 58 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 57 | 21 - 178 |
| 13C12-123478-HxCDF | 59 | 26 - 152 |
| 13C12-123678-HxCDF | 69 | 26 - 123 |
| 13C12-234678-HxCDF | 61 | 28 - 136 |
| 13C12-123789-HxCDF | 60 | 29 - 147 |
| 13C12-1234678-HpCDF | 91 | 28 - 143 |
| 13C12-1234789-HpCDF | 47 | 26 - 138 |
| 13C12-OCDF | 37 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471539**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:58 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56905 SDG#: PH189-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471539**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:58 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56905 SDG#: PH189-09*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 11:32 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141430011A | 05/26/2014 12:34 | Jessica L Miller | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141430011A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440030A | 05/28/2014 04:01 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440031A | 05/31/2014 01:53 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440031A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440030A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148003 | 05/31/2014 07:18 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14148003 | 05/28/2014 10:10 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-569-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7471539**
**LL Group # 1475905**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/20/2014 10:58 by BC

Submitted: 05/21/2014 09:50
Reported: 06/03/2014 16:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56905 SDG#: PH189-09*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10146 | Zirconium | SW-846 6010C | 1 | 141430637001 | 05/28/2014 10:16 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141430637001B | 05/28/2014 07:23 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:23 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:23 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141430637001A | 05/28/2014 07:23 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141410638002 | 05/23/2014 09:52 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141430637001 | 05/27/2014 07:53 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141410638002 | 05/22/2014 12:50 | Denise K Conners | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14141039401B | 05/21/2014 22:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401A | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLF026 | Sample number(s): 7471532-7471539 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 84 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 95 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 88 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 114 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 112 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 80-119 | | |
| Batch number: 14142A94A | Sample number(s): 7471531 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 109 | 111 | 80-133 | 2 | 30 |
| Batch number: 14147B16A | Sample number(s): 7471533-7471536,7471538 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 88 | | 67-120 | | |
| Batch number: 141430011A | Sample number(s): 7471532-7471539 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 87 | 87 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 100 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 108 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141440030A | Sample number(s): 7471532-7471539 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 85 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 77 | | 60-115 | | |
| Batch number: 141440031A | Sample number(s): 7471532-7471539 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 85 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 85 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 84 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 81 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68 | | 60-115 | | |
| Batch number: 141410638002 | Sample number(s): 7471532-7471539 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 95 | | 85-120 | | |
| Batch number: 141430637001 | Sample number(s): 7471532-7471539 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 106 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 106 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 100 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 104 | | 80-120 | | |
| Calcium | 7.84 | J | 20.0 | 3.34 | mg/kg | 102 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 103 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 106 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 100 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 108 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 105 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 103 | | 80-120 | | |
| Tin | 1.46 | J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 106 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 103 | | 80-120 | | |
| Zinc | 0.461 | J | 4.00 | 0.200 | mg/kg | 103 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 104 | | 80-120 | | |
| Batch number: 141430637001A | Sample number(s): 7471532-7471539 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 106 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 100 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 106 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141430637001B | Sample number(s): 7471532-7471539 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 106 | | 80-120 | | |
| Batch number: 14141039401A | Sample number(s): 7471532-7471536 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14141039401B | Sample number(s): 7471537-7471539 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14147162401A | Sample number(s): 7471532-7471539 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14148003 | Sample number(s): 7471532-7471539 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0400 | ng/kg | 91 | | 67-158 | | |
| 12378-PeCDD | 0.0674 J | 5.00 | 0.0286 | ng/kg | 97 | | 70-142 | | |
| 123478-HxCDD | 5.00 U | 5.00 | 0.0192 | ng/kg | 98 | | 70-164 | | |
| 123678-HxCDD | 0.0322 J | 5.00 | 0.0199 | ng/kg | 94 | | 76-134 | | |
| 123789-HxCDD | 0.0351 J | 5.00 | 0.0195 | ng/kg | 93 | | 64-162 | | |
| 1234678-HpCDD | 0.104 J | 5.00 | 0.0213 | ng/kg | 92 | | 70-140 | | |
| OCDD | 0.662 J | 10.0 | 0.0258 | ng/kg | 92 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0272 | ng/kg | 104 | | 75-158 | | |
| 2378-TCDF-Conf | 1.00 U | 1.00 | 0.0743 | ng/kg | 104 | | 75-158 | | |
| 12378-PeCDF | 0.0961 J | 5.00 | 0.0195 | ng/kg | 97 | | 80-134 | | |
| 23478-PeCDF | 0.0685 J | 5.00 | 0.0194 | ng/kg | 97 | | 68-160 | | |
| 123478-HxCDF | 0.0887 J | 5.00 | 0.0170 | ng/kg | 95 | | 72-134 | | |
| 123678-HxCDF | 0.0451 J | 5.00 | 0.0160 | ng/kg | 95 | | 84-130 | | |
| 123789-HxCDF | 0.0531 J | 5.00 | 0.0170 | ng/kg | 94 | | 78-130 | | |
| 234678-HxCDF | 0.0468 J | 5.00 | 0.0165 | ng/kg | 97 | | 70-156 | | |
| 1234678-HpCDF | 0.0707 J | 5.00 | 0.0102 | ng/kg | 92 | | 82-122 | | |
| 1234789-HpCDF | 0.0368 J | 5.00 | 0.0171 | ng/kg | 92 | | 78-138 | | |
| OCDF | 0.0875 J | 10.0 | 0.0344 | ng/kg | 94 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0870 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLF026 | Sample number(s): 7471532-7471539 UNSPK: P471505 | | | | | | | | |
| Acenaphthene | 101 | 99 | 48-127 | 1 | 30 | | | | |
| Acenaphthylene | 99 | 102 | 60-128 | 3 | 30 | | | | |
| Anthracene | 99 | 103 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 107 | 112 | 44-143 | 5 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)pyrene | 95 | 96 | 49-137 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 106 | 102 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 85 | 86 | 63-111 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 89 | 92 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 92 | 94 | 49-144 | 3 | 30 | | | | |
| Butylbenzylphthalate | 110 | 112 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 114 | 109 | 52-147 | 4 | 30 | | | | |
| Chrysene | 92 | 96 | 43-141 | 4 | 30 | | | | |
| Dibenz(a,h)anthracene | 93 | 96 | 25-145 | 4 | 30 | | | | |
| Diethylphthalate | 80 | 83 | 66-140 | 5 | 30 | | | | |
| Dimethylphthalate | 87 | 89 | 70-123 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 123 | 121 | 48-164 | 1 | 30 | | | | |
| Fluoranthene | 94 | 106 | 38-153 | 11 | 30 | | | | |
| Fluorene | 98 | 100 | 57-130 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 98 | 95 | 26-139 | 3 | 30 | | | | |
| 1-Methylnaphthalene | 92 | 92 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 97 | 46-147 | 3 | 30 | | | | |
| Naphthalene | 93 | 97 | 52-136 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 89 | 87 | 39-134 | 1 | 30 | | | | |
| Di-n-octylphthalate | 121 | 119 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 93 | 101 | 50-137 | 8 | 30 | | | | |
| Pyrene | 83 | 96 | 26-143 | 14 | 30 | | | | |
| Batch number: 14147B16A | Sample number(s): 7471533-7471536,7471538 UNSPK: P471505 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 76 | 79 | 69-123 | 1 | 30 | | | | |
| Batch number: 141430011A | Sample number(s): 7471532-7471539 UNSPK: P471505 | | | | | | | | |
| PCB-1016 | 96 | 84 | 41-135 | 12 | 50 | | | | |
| PCB-1260 | 102 | 88 | 40-134 | 14 | 50 | | | | |
| Batch number: 141440030A | Sample number(s): 7471532-7471539 UNSPK: P471505 | | | | | | | | |
| EFH (C12-C14) | 86 | 88 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 112 | 106 | 49-123 | 6 | 20 | | | | |
| EFH (C21-C30) | 91 | 42* | 49-123 | 26* | 20 | | | | |
| EFH (C30-C40) | 130* | 28* | 49-123 | 38* | 20 | | | | |
| EFH (C8-C11) | 76 | 77 | 49-123 | 1 | 20 | | | | |
| Batch number: 141440031A | Sample number(s): 7471532-7471539 UNSPK: P471505 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 82 | 73 | 49-123 | 12 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 84 | 75 | 49-123 | 13 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 96 | 79 | 49-123 | 20 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 90 | 78 | 49-123 | 16 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 64 | 58 | 49-123 | 11 | 20 | | | | |
| Batch number: 141410638002 | Sample number(s): 7471532-7471539 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| 3a Mercury 7471A | 107 | 96 | 65-135 | 11 | 20 | 0.0109 J | 0.0097 J | 12 (1) | 20 |
| Batch number: 141430637001 | Sample number(s): 7471532-7471539 UNSPK: P470316 BKG: P470316 | | | | | | | | |
| Aluminum | 2456 (2) | 3885 (2) | 75-125 | 8 | 20 | 25,100 | 24,700 | 2 | 20 |
| Antimony | 41* | 34* | 75-125 | 20 | 20 | 3.92 U | 3.96 U | 0 (1) | 20 |
| Arsenic | 105 | 95 | 75-125 | 10 | 20 | 2.52 J | 2.75 J | 9 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 93 | 100 | 75-125 | 3 | 20 | 106 | 104 | 2 | 20 |
| Beryllium | 100 | 103 | 75-125 | 1 | 20 | 0.865 J | 0.830 J | 4 (1) | 20 |
| Boron | 99 | 100 | 75-125 | 1 | 20 | 10.9 | 11.3 | 3 (1) | 20 |
| Cadmium | 80 | 74* | 75-125 | 9 | 20 | 0.980 U | 0.990 U | 0 (1) | 20 |
| Calcium | 11145 (2) | 2442 (2) | 75-125 | 81* | 20 | 15,600 | 35,000 | 77* | 20 |
| Chromium | 100 | 119 | 75-125 | 6 | 20 | 30.6 | 29.8 | 3 | 20 |
| Cobalt | 88 | 90 | 75-125 | 0 | 20 | 6.06 | 7.75 | 24* | 20 |
| Copper | 104 | 110 | 75-125 | 3 | 20 | 16.5 | 16.1 | 2 | 20 |
| Iron | -1341 (2) | 1088 (2) | 75-125 | 9 | 20 | 27,600 | 26,500 | 4 | 20 |
| Lead | 72* | 81 | 75-125 | 5 | 20 | 11.4 | 11.9 | 5 (1) | 20 |
| Lithium | 103 | 106 | 75-125 | 1 | 20 | 22.6 | 22.0 | 3 | 20 |
| Magnesium | 13 (2) | 323 (2) | 75-125 | 9 | 20 | 6,130 | 5,900 | 4 | 20 |
| Manganese | 95 (2) | 112 (2) | 75-125 | 2 | 20 | 226 | 305 | 30* | 20 |
| Molybdenum | 86 | 87 | 75-125 | 2 | 20 | 1.96 U | 1.98 U | 0 (1) | 20 |
| Nickel | 86 | 90 | 75-125 | 2 | 20 | 14.8 | 15.2 | 3 | 20 |
| Phosphorus | 104 | 99 | 75-125 | 2 | 20 | 208 | 207 | 0 | 20 |
| Potassium | 126* | 164* | 75-125 | 9 | 20 | 2,370 | 2,350 | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 1 | 20 | 141 | 140 | 1 (1) | 20 |
| Tin | 82 | 82 | 75-125 | 2 | 20 | 2.89 J | 2.74 J | 6 (1) | 20 |
| Titanium | 445 (2) | 622 (2) | 75-125 | 12 | 20 | 885 | 874 | 1 | 20 |
| Vanadium | 109 | 125 | 75-125 | 6 | 20 | 53.3 | 52.5 | 2 | 20 |
| Zinc | 87 | 96 | 75-125 | 4 | 20 | 55.7 | 53.8 | 3 | 20 |
| Zirconium | 96 | 97 | 75-125 | 1 | 20 | 5.22 | 5.69 | 8 (1) | 20 |
| Batch number: 141430637001A | Sample number(s): 7471532-7471539 UNSPK: P470316 BKG: P470316 | | | | | | | | |
| Silver | 100 | 105 | 75-125 | 2 | 20 | 0.0429 J | 0.0562 J | 27* (1) | 20 |
| Strontium | 122 (2) | 153 (2) | 75-125 | 4 | 20 | 41.3 | 45.1 | 9 | 20 |
| Thallium | 99 | 109 | 75-125 | 4 | 20 | 0.274 | 0.293 | 7 (1) | 20 |
| Batch number: 141430637001B | Sample number(s): 7471532-7471539 UNSPK: P470316 BKG: P470316 | | | | | | | | |
| Selenium | 94 | 96 | 75-125 | 1 | 20 | 0.392 U | 0.396 U | 0 (1) | 20 |
| Batch number: 14141039401A | Sample number(s): 7471532-7471536 BKG: P471505 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.00 | 6.96 | 1 | 3 |
| Batch number: 14141039401B | Sample number(s): 7471537-7471539 BKG: 7471539 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.43 | 8.40 | 0 | 3 |
| Batch number: 14147162401A | Sample number(s): 7471532-7471539 BKG: 7471535 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.2 | 7.3 | 1 | 20 |
| Batch number: 14148003 | Sample number(s): 7471532-7471539 UNSPK: P471505 | | | | | | | | |
| 2378-TCDD | 93 | 93 | 40-135 | 0 | 20 | | | | |
| 12378-PeCDD | 94 | 95 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 97 | 97 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDD | 94 | 93 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 95 | 94 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 94 | 93 | 40-135 | 1 | 20 | | | | |
| OCDD | 102 | 92 | 40-135 | 10 | 20 | | | | |
| 2378-TCDF | 100 | 99 | 40-135 | 1 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2378-TCDF-Conf | 100 | 99 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 96 | 99 | 40-135 | 3 | 20 | | | | |
| 23478-PeCDF | 98 | 98 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 96 | 96 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 95 | 94 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDF | 94 | 96 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 98 | 97 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 93 | 93 | 40-135 | 0 | 20 | | | | |
| 1234789-HpCDF | 94 | 93 | 40-135 | 1 | 20 | | | | |
| OCDF | 93 | 93 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14142SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7471532 | 86 | 95 | 80 |
| 7471533 | 87 | 97 | 81 |
| 7471534 | 89 | 99 | 82 |
| 7471535 | 91 | 102 | 82 |
| 7471536 | 88 | 94 | 83 |
| 7471537 | 90 | 101 | 82 |
| 7471538 | 88 | 100 | 83 |
| 7471539 | 91 | 103 | 83 |
| Blank | 92 | 106 | 85 |
| LCS | 96 | 110 | 88 |
| MS | 90 | 100 | 83 |
| MSD | 89 | 99 | 82 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14142A94A

| | Trifluorotoluene-F |
|---|---|
| 7471531 | 86 |
| Blank | 86 |
| LCS | 97 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14147B16A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

## Surrogate Quality Control

| | Trifluorotoluene-F |
|---|---|
| 7471533 | 85 |
| 7471534 | 92 |
| 7471535 | 87 |
| 7471536 | 90 |
| 7471538 | 81 |
| Blank | 98 |
| LCS | 101 |
| MS | 90 |
| MSD | 83 |
| Limits: | 50-142 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141430011A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7471532 | 92 | 99 |
| 7471533 | 98 | 108 |
| 7471534 | 102 | 110 |
| 7471535 | 99 | 105 |
| 7471536 | 96 | 101 |
| 7471537 | 95 | 103 |
| 7471538 | 100 | 106 |
| 7471539 | 93 | 102 |
| Blank | 104 | 108 |
| LCS | 104 | 117 |
| LCSD | 102 | 112 |
| MS | 104 | 114 |
| MSD | 95 | 96 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141440030A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7471532 | 69 | 81 |
| 7471533 | 72 | 85 |
| 7471534 | 71 | 83 |
| 7471535 | 70 | 89 |
| 7471536 | 73 | 89 |
| 7471537 | 75 | 93 |
| 7471538 | 73 | 87 |
| 7471539 | 76 | 90 |
| Blank | 79 | 91 |
| LCS | 80 | 94 |
| MS | 75 | 85 |
| MSD | 77 | 88 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141440031A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7471532 | 65 | 68 |
| 7471533 | 63 | 74 |
| 7471534 | 55 | 64* |
| 7471535 | 56 | 70 |
| 7471536 | 57 | 67 |
| 7471537 | 60 | 67 |
| 7471538 | 58 | 67 |
| 7471539 | 62 | 73 |
| Blank | 79 | 90 |
| LCS | 77 | 87 |
| MS | 73 | 84 |
| MSD | 65 | 75 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14148003

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7471532 | 74 | 71 | 78 | 80 | 78 | 74 |
| 7471533 | 68 | 74 | 76 | 77 | 78 | 76 |
| 7471534 | 73 | 75 | 78 | 78 | 77 | 76 |
| 7471535 | 71 | 73 | 77 | 77 | 76 | 71 |
| 7471536 | 68 | 68 | 74 | 72 | 73 | 69 |
| 7471537 | 70 | 74 | 80 | 78 | 81 | 77 |
| 7471538 | 63 | 67 | 71 | 72 | 73 | 71 |
| 7471539 | 66 | 69 | 75 | 72 | 73 | 72 |
| Blank | 81 | 87 | 91 | 92 | 92 | 89 |
| MS | 82 | 83 | 88 | 85 | 86 | 84 |
| MSD | 70 | 72 | 79 | 79 | 79 | 74 |
| OPR | 66 | 73 | 80 | 79 | 80 | 76 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7471532 | 59 | | 74 | 64 | 68 | 75 |
| 7471533 | 63 | 64 | 74 | 64 | 66 | 74 |
| 7471534 | 62 | 69 | 75 | 67 | 67 | 74 |
| 7471535 | 60 | 66 | 73 | 67 | 67 | 75 |
| 7471536 | 59 | 64 | 70 | 62 | 65 | 71 |
| 7471537 | 63 | 65 | 76 | 66 | 70 | 77 |
| 7471538 | 57 | 61 | 67 | 61 | 64 | 69 |
| 7471539 | 63 | 58 | 68 | 57 | 59 | 69 |
| Blank | 76 | 76 | 85 | 80 | 81 | 86 |
| MS | 72 | 77 | 82 | 75 | 76 | 82 |
| MSD | 63 | 66 | 71 | 66 | 69 | 74 |
| OPR | 69 | 57 | 69 | 63 | 63 | 71 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-2378-TCDF-Conf |
|---|---|---|---|---|---|---|
| 7471532 | 71 | 62 | 86 | 54 | 42 | 70 |
| 7471533 | 69 | 68 | 90 | 55 | 44 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1475905
Reported: 06/03/14 at 04:58 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7471534 | 71 | 70 | 90 | 55 | 44 | |
| 7471535 | 69 | 62 | 85 | 53 | 43 | |
| 7471536 | 66 | 70 | 82 | 52 | 43 | |
| 7471537 | 72 | 76 | 91 | 57 | 46 | |
| 7471538 | 66 | 73 | 83 | 54 | 43 | |
| 7471539 | 61 | 60 | 91 | 47 | 37 | |
| Blank | 83 | 87 | 100 | 69 | 58 | 79 |
| MS | 78 | 83 | 91 | 65 | 56 | 77 |
| MSD | 71 | 71 | 81 | 59 | 49 | 66 |
| OPR | 66 | 64 | 87 | 54 | 46 | 57 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | 24-169 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/20/2014
CarrierName: FedEx
AirbillNo: 770044397602

A-13013
G-1475905
S-7471531-39

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140520-09
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB3-052014 | 5/20/14 08:00 | WQ | HCl | 6 - 40 mL Vial | 0 | | | | | | | | | | | | | | | | | | X | X | | | | | | | | | | | | | | | | For all EFH, silica gel |
| SL-611-SA8-TR-0.5 | 5/20/14 09:10 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | clean up required on half |
| SL-611-SA8-TR-5.0 | 5/20/14 09:15 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | the extract. Analyze both |
| SL-611-SA8-TR-5.0 | 5/20/14 09:15 | SO | None | 2 - Encore | 0 | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | extracts for EFH. |
| SL-611-SA8-TR-10.5 | 5/20/14 09:20 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-611-SA8-TR-10.5 | 5/20/14 09:20 | SO | None | 2 - Encore | 0 | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-570-SA6-TR-6.0 | 5/20/14 13:43 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-570-SA6-TR-6.0 | 5/20/14 13:43 | SO | None | 2 - Encore | 0 | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-570-SA6-TR-2.0 | 5/20/14 13:00 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-570-SA6-TR-2.0 | 5/20/14 13:00 | SO | None | 2 - Encore | 0 | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-570-SA6-TR-0.5 | 5/20/14 12:10 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-569-SA6-TR-2.5 | 5/20/14 11:15 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-569-SA6-TR-2.5 | 5/20/14 11:15 | SO | None | 2 - Encore | 0 | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-569-SA6-TR-0.5 | 5/20/14 10:58 | SO | None | 2 - 16 oz glass | 0 | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Ben Cranenoso

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stop Mypdos | 5/20/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Ben Cranenoso | 5.21.14 | 950 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15127

Group Number(s): 1475900S

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/21/2014 9:50 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | Yes | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 11:13 on 05/21/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.3 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.2 | DT | Wet | Y | Bagged | N | N |

### Container Quantity Discrepancy Details: SSFL

| Sample ID on COC | Container Qty. Received | Container Qty. on COC | Comments |
|---|---|---|---|
| FDG2-SL-874-SA5A-0.0-0.5 | 3 | 2 | rec 1 4oz jar & 2 sleeves |

General Comments: TB1 rec 3 vials



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

May 29, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/22/2014
Group Number: 1476367
SDG: PH190
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-052114 Water | 7473394 |
| SVL-512-SA5D-SB-5.0-6.0 Soil | 7473395 |
| SVL-515-SA5D-SB-5.0-6.0 Soil | 7473396 |
| EB-052114 Water | 7473397 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB2-052114 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7473394**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:00

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB25D SDG#: PH190-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052114 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7473394**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:00

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB25D SDG#: PH190-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 13:08 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 13:08 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-512-SA5D-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473395**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:40 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51250 SDG#: PH190-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.91 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.91 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.91 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.91 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.91 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.91 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.91 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.91 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-512-SA5D-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473395**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:40 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51250 SDG#: PH190-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.91 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.91 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.91 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.91 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.91 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.91 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 13.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 06:20 | Stephanie A Selis | 0.91 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414234582 | 05/22/2014 15:20 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-512-SA5D-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473395**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:40 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51250 SDG#: PH190-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414234582 | 05/22/2014 15:20 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414234582 | 05/22/2014 15:09 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-515-SA5D-SB-5.0-6.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473396**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 15:10 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51550 SDG#: PH190-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 23 | U | 23 | 8 | 0.99 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 23 | 0.99 |
| 10237 | Acrylonitrile | 107-13-1 | 23 | U | 23 | 5 | 0.99 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 0.99 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 5 | 0.99 |
| 10237 | t-Butyl alcohol | 75-65-0 | 57 | U | 57 | 23 | 0.99 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.99 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.99 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-515-SA5D-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473396**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 15:10 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51550 SDG#: PH190-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 3 | 0.99 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 0.99 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.99 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 0.99 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.99 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 0.99 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.9 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 06:42 | Stephanie A Selis | 0.99 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414234582 | 05/22/2014 15:20 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-515-SA5D-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473396**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 15:10 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51550 SDG#: PH190-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414234582 | 05/22/2014 15:20 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414234582 | 05/22/2014 15:08 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-052114 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7473397**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:10 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB521 SDG#: PH190-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-052114 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7473397**
**LL Group # 1476367**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:10 by VV

Submitted: 05/22/2014 09:25
Reported: 05/29/2014 14:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB521 SDG#: PH190-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 13:29 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 13:29 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476367
Reported: 05/29/14 at 02:14 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7473395-7473396 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 108 | 112 | 41-149 | 3 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 92 | 88 | 50-137 | 5 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 91 | 88 | 58-123 | 3 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 86 | 88 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 96 | 93 | 80-120 | 3 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 120 | 117 | 75-129 | 2 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 96 | 95 | 75-120 | 1 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 102 | 96 | 70-126 | 6 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 109 | 108 | 32-162 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 98 | 99 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 93 | 99 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 95 | 93 | 72-120 | 2 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 97 | 93 | 69-120 | 4 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 94 | 95 | 75-120 | 1 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 73 | 71 | 63-128 | 3 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 98 | 96 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 100 | 95 | 80-120 | 5 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 102 | 101 | 17-171 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 87 | 90 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 108 | 106 | 80-120 | 2 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 91 | 85 | 70-130 | 6 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 89 | 85 | 56-120 | 4 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 93 | 93 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 94 | 96 | 79-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 95 | 89 | 22-131 | 6 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 79 | 90 | 50-132 | 13 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 99 | 95 | 77-120 | 4 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 80-120 | 2 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 75-120 | 2 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 98 | 80-120 | 5 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 102 | 80-120 | 10 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 74 | 71 | 26-137 | 5 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 96 | 71-122 | 2 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 110 | 108 | 66-136 | 1 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 103 | 100 | 73-129 | 3 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 100 | 80-120 | 4 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 106 | 103 | 79-120 | 3 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 96 | 97 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 73-120 | 1 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 90 | 88 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476367
Reported: 05/29/14 at 02:14 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 100 | 96 | 77-120 | 4 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 74-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 88 | 86 | 69-120 | 2 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 88 | 89 | 59-134 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 98 | 94 | 80-120 | 4 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 74 | 71 | 64-137 | 3 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 118 | 113 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 105 | 105 | 46-130 | 0 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 86 | 85 | 40-129 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 68-128 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 101 | 97 | 76-120 | 4 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 89 | 88 | 69-120 | 2 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 102 | 99 | 72-130 | 3 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 93 | 91 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 91 | 92 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 104 | 103 | 80-124 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 96 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 101 | 96 | 76-120 | 4 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 95 | 80-120 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 86 | 93 | 71-123 | 8 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 106 | 103 | 78-120 | 3 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 94 | 89 | 80-120 | 5 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 105 | 100 | 64-120 | 5 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 97 | 99 | 68-120 | 3 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 63-135 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 100 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 102 | 101 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 91 | 86 | 58-133 | 5 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 94 | 100 | 71-123 | 6 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 79-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 94 | 95 | 78-120 | 2 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 74 | 70 | 40-127 | 6 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | 92 | 59-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | 97 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 97 | 94 | 80-120 | 3 | 30 |
| Batch number: Y141471AA | Sample number(s): 7473394,7473397 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476367
Reported: 05/29/14 at 02:14 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476367
Reported: 05/29/14 at 02:14 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14147162401B | Sample number(s): 7473395-7473396 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7473395-7473396 UNSPK: P475237 | | | | | | | | |
| Acetone | 109 | 118 | 31-195 | 7 | 30 | | | | |
| Acrolein | 87 | 71 | 10-165 | 22 | 30 | | | | |
| Acrylonitrile | 75 | 82 | 48-139 | 8 | 30 | | | | |
| t-Amyl methyl ether | 83 | 85 | 50-132 | 2 | 30 | | | | |
| Benzene | 101 | 94 | 55-143 | 8 | 30 | | | | |
| Bromobenzene | 109 | 92 | 43-139 | 18 | 30 | | | | |
| Bromochloromethane | 118 | 110 | 60-137 | 8 | 30 | | | | |
| Bromodichloromethane | 98 | 91 | 53-136 | 8 | 30 | | | | |
| Bromoform | 94 | 91 | 50-144 | 4 | 30 | | | | |
| Bromomethane | 121 | 111 | 42-168 | 9 | 30 | | | | |
| 2-Butanone | 85 | 93 | 37-163 | 8 | 30 | | | | |
| t-Butyl alcohol | 95 | 88 | 47-153 | 8 | 30 | | | | |
| n-Butylbenzene | 115 | 76 | 30-146 | 42* | 30 | | | | |
| sec-Butylbenzene | 109 | 88 | 33-157 | 23 | 30 | | | | |
| tert-Butylbenzene | 108 | 86 | 41-152 | 23 | 30 | | | | |
| Carbon Disulfide | 78 | 71 | 48-146 | 9 | 30 | | | | |
| Carbon Tetrachloride | 109 | 100 | 51-165 | 9 | 30 | | | | |
| Chlorobenzene | 105 | 93 | 49-135 | 13 | 30 | | | | |
| Chloroethane | 114 | 106 | 39-152 | 8 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 73 | 76 | 32-139 | 3 | 30 | | | | |
| Chloroform | 111 | 105 | 61-142 | 7 | 30 | | | | |
| 1-Chlorohexane | 106 | 89 | 70-130 | 18 | 30 | | | | |
| Chloromethane | 102 | 93 | 36-143 | 9 | 30 | | | | |
| 2-Chlorotoluene | 105 | 88 | 42-146 | 18 | 30 | | | | |
| 4-Chlorotoluene | 108 | 85 | 39-145 | 24 | 30 | | | | |
| Chlorotrifluoroethene | 109 | 105 | 70-130 | 0 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 79 | 74 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 97 | 90 | 51-128 | 8 | 30 | | | | |
| 1,2-Dibromoethane | 95 | 91 | 54-129 | 5 | 30 | | | | |
| Dibromomethane | 95 | 93 | 57-130 | 3 | 30 | | | | |
| 1,2-Dichlorobenzene | 111 | 89 | 36-133 | 24 | 30 | | | | |
| 1,3-Dichlorobenzene | 108 | 86 | 34-134 | 24 | 30 | | | | |
| 1,4-Dichlorobenzene | 108 | 83 | 35-136 | 27 | 30 | | | | |
| Dichlorodifluoromethane | 106 | 102 | 26-151 | 5 | 30 | | | | |
| 1,1-Dichloroethane | 100 | 95 | 63-142 | 7 | 30 | | | | |
| 1,2-Dichloroethane | 108 | 104 | 54-143 | 5 | 30 | | | | |
| 1,1-Dichloroethene | 111 | 105 | 61-149 | 6 | 30 | | | | |
| cis-1,2-Dichloroethene | 103 | 98 | 67-135 | 6 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476367
Reported: 05/29/14 at 02:14 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 111 | 103 | 64-144 | 9 | 30 | | | | |
| 1,2-Dichloropropane | 97 | 93 | 54-144 | 6 | 30 | | | | |
| 1,3-Dichloropropane | 94 | 89 | 51-140 | 6 | 30 | | | | |
| 2,2-Dichloropropane | 94 | 88 | 53-147 | 8 | 30 | | | | |
| 1,1-Dichloropropene | 106 | 97 | 54-145 | 10 | 30 | | | | |
| cis-1,3-Dichloropropene | 88 | 86 | 45-137 | 3 | 30 | | | | |
| trans-1,3-Dichloropropene | 85 | 82 | 51-134 | 5 | 30 | | | | |
| Ethyl t-butyl ether | 85 | 87 | 58-124 | 2 | 30 | | | | |
| Ethylbenzene | 102 | 91 | 44-141 | 13 | 30 | | | | |
| Freon 113 | 102 | 91 | 56-156 | 12 | 30 | | | | |
| Freon 133a | 118 | 116 | 61-131 | 2 | 30 | | | | |
| Hexachlorobutadiene | 127 | 75 | 10-155 | 53* | 30 | | | | |
| 2-Hexanone | 74 | 81 | 32-160 | 8 | 30 | | | | |
| di-Isopropyl ether | 91 | 90 | 59-133 | 3 | 30 | | | | |
| Isopropylbenzene | 108 | 89 | 38-144 | 21 | 30 | | | | |
| p-Isopropyltoluene | 103 | 79 | 29-152 | 28 | 30 | | | | |
| Methyl Iodide | 106 | 99 | 52-139 | 8 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 86 | 90 | 55-129 | 4 | 30 | | | | |
| 4-Methyl-2-pentanone | 75 | 82 | 46-139 | 9 | 30 | | | | |
| Methylene Chloride | 107 | 100 | 60-149 | 7 | 30 | | | | |
| n-Propylbenzene | 111 | 88 | 39-157 | 23 | 30 | | | | |
| Styrene | 105 | 90 | 35-134 | 16 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 101 | 92 | 55-139 | 11 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 88 | 87 | 29-182 | 2 | 30 | | | | |
| Tetrachloroethene | 134 | 112 | 42-149 | 19 | 30 | | | | |
| Toluene | 102 | 87 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 104 | 75 | 10-140 | 33* | 30 | | | | |
| 1,2,4-Trichlorobenzene | 102 | 73 | 10-136 | 33* | 30 | | | | |
| 1,1,1-Trichloroethane | 99 | 93 | 52-146 | 7 | 30 | | | | |
| 1,1,2-Trichloroethane | 99 | 95 | 58-152 | 5 | 30 | | | | |
| Trichloroethene | 105 | 97 | 53-144 | 9 | 30 | | | | |
| Trichlorofluoromethane | 116 | 104 | 47-163 | 12 | 30 | | | | |
| 1,2,3-Trichloropropane | 95 | 91 | 36-180 | 5 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 104 | 86 | 37-149 | 20 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 109 | 87 | 38-150 | 24 | 30 | | | | |
| Vinyl Acetate | 46 | 40 | 21-139 | 12 | 30 | | | | |
| Vinyl Chloride | 111 | 100 | 50-154 | 11 | 30 | | | | |
| m+p-Xylene | 104 | 88 | 44-137 | 18 | 30 | | | | |
| o-Xylene | 101 | 89 | 42-137 | 14 | 30 | | | | |
| Batch number: 14147162401B | Sample number(s): 7473395-7473396 | | | | | BKG: 7473396 | | | |
| 14a Moisture Content by 160.3 | | | | | | 12.9 | 13.8 | 6 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476367
Reported: 05/29/14 at 02:14 PM

## Surrogate Quality Control

Batch number: B141491AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7473395 | 106 | 102 | 99 | 92 |
| 7473396 | 107 | 104 | 99 | 91 |
| Blank | 109 | 104 | 97 | 94 |
| LCS | 106 | 105 | 97 | 109 |
| LCSD | 106 | 103 | 98 | 102 |
| MS | 104 | 98 | 103 | 100 |
| MSD | 106 | 105 | 102 | 102 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7473394 | 101 | 101 | 98 | 95 |
| 7473397 | 101 | 101 | 98 | 95 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

A-13013
G-1476367
S-1473394-97

DateShipped: 5/21/2014
CarrierName: FedEx
AirbillNo: 770058142099

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140521-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-052114 | 5/21/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-512-SA5D-SB-5.0-6.0 | 5/21/14 13:40 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-512-SA5D-SB-5.0-6.0 | 5/21/14 13:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | soil moisture |
| SVL-515-SA5D-SB-5.0-6.0 | 5/21/14 15:10 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-515-SA5D-SB-5.0-6.0 | 5/21/14 15:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | soil moisture |

Special Instructions:

**Sampler:** Van Vallanash

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/21/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/22/14 | 0925 |

SOIL VAPOR

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/21/2014
CarrierName: FedEx
AirbillNo: 770058142099

A-13013
G-1476367
S-7473394-97

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140521-04
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate. Nitrite. TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-052114 | 5/21/14 14:10 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Van Vathanaxay

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 05/21/2014 | 16:00 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/22/14 | 0925 |

SOIL VAPOR

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15293

Group Number(s): 476367

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/22/2014 9:25 |
| Number of Packages: | 4 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | No | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:54 on 05/22/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 0.8 | DT | Wet | Y | Bagged | N | N |
| 3 | DT131 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 4 | DT131 | 1.0 | DT | Wet | Y | Bagged | N | N |

## Sample Date/Time Discrepancy Details

| Sample ID on COC | Date/Time on Label | Comments |
|---|---|---|
| FDG2-SL-584SA5D-SB-4.0-5.0 | 5/21/2014 08:18 | 1 16 oz. container |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 13, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/22/2014
Group Number: 1476280
SDG: PH191
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| FB-052114 Water | 7472961 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | | |
| 10335 | Chloroform | 67-66-3 | 0.7 | J | 5 | 0.5 | | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 7 | | 5 | 2 | | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B SIM** | | ug/l | | ug/l | ug/l | ug/l | |
| 00527 | 1,4-Dioxane | 123-91-1 | 2.0 | U | 2.0 | 0.5 | | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270D** | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | Acenaphthene | 83-32-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Acenaphthylene | 208-96-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Aniline | 62-53-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Anthracene | 120-12-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzidine | 92-87-5 | 63 | U | 63 | 21 | | 1 |
| 10461 | Benzo(a)anthracene | 56-55-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(a)pyrene | 50-32-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(b)fluoranthene | 205-99-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(g,h,i)perylene | 191-24-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(k)fluoranthene | 207-08-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzoic acid | 65-85-0 | 16 | U | 16 | 6 | | 1 |
| 10461 | Benzyl alcohol | 100-51-6 | 16 | U | 16 | 11 | | 1 |
| 10461 | 1,1'-Biphenyl | 92-52-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Bromophenyl-phenylether | 101-55-3 | 1 | U | 1 | 0.5 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | Butylbenzylphthalate | 85-68-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Di-n-butylphthalate | 84-74-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | Carbazole | 86-74-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chloro-3-methylphenol | 59-50-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chloroaniline | 106-47-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethoxy)methane | 111-91-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethyl)ether | 111-44-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 1 | U | 1 | 0.5 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Chloronaphthalene | 91-58-7 | 1 | U | 1 | 0.4 | | 1 |
| 10461 | 2-Chlorophenol | 95-57-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chlorophenyl-phenylether | 7005-72-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Chrysene | 218-01-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenz(a,h)anthracene | 53-70-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenzofuran | 132-64-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,2-Dichlorobenzene | 95-50-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,3-Dichlorobenzene | 541-73-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,4-Dichlorobenzene | 106-46-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,3'-Dichlorobenzidine | 91-94-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dichlorophenol | 120-83-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,6-Dichlorophenol | 87-65-0 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Diethylphthalate | 84-66-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dimethylphenol | 105-67-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,5-Dimethylphenol | 108-68-9 | 11 | U | 11 | 3 | | 1 |
| 10461 | Dimethylphthalate | 131-11-3 | 5 | U | 5 | 2 | | 1 |
| 10461 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 16 | U | 16 | 5 | | 1 |
| 10461 | 2,4-Dinitrophenol | 51-28-5 | 32 | U | 32 | 11 | | 1 |
| 10461 | 1,2-Diphenylhydrazine | 122-66-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Ethylhexyl)phthalate | 117-81-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Fluoranthene | 206-44-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Fluorene | 86-73-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobenzene | 118-74-1 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobutadiene | 87-68-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Hexachlorocyclopentadiene | 77-47-4 | 16 | U | 16 | 5 | | 1 |
| 10461 | Hexachloroethane | 67-72-1 | 5 | U | 5 | 1 | | 1 |
| 10461 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Isophorone | 78-59-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1-Methylnaphthalene | 90-12-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylnaphthalene | 91-57-6 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylphenol | 95-48-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Methylphenol | 106-44-5 | 1 | U | 1 | 0.5 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10461 | Naphthalene | 91-20-3 | 0.2 | J | 0.5 | 0.1 | | 1 |
| 10461 | NDPA as diphenylamine | n.a. | 5 | U | 5 | 2 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Nitroaniline | 88-74-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3-Nitroaniline | 99-09-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Nitroaniline | 100-01-6 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Nitrobenzene | 98-95-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2-Nitrophenol | 88-75-5 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Nitrophenol | 100-02-7 | 32 | U | 32 | 11 | | 1 |
| 10461 | N-Nitrosodimethylamine | 62-75-9 | 5 | U | 5 | 2 | | 1 |
| 10461 | N-Nitroso-di-n-propylamine | 621-64-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | N-Nitrosodiphenylamine | 86-30-6 | 1 | U | 1 | 0.5 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | Di-n-octylphthalate | 117-84-0 | 5 | U | 5 | 2 | | 1 |
| 10461 | Pentachlorophenol | 87-86-5 | 5 | U | 5 | 1 | | 1 |
| 10461 | Phenanthrene | 85-01-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Phenol | 108-95-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Pyrene | 129-00-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Pyridine | 110-86-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 1,2,4-Trichlorobenzene | 120-82-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,5-Trichlorophenol | 95-95-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,6-Trichlorophenol | 88-06-2 | 1 | U | 1 | 0.5 | | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.053 | | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.089 | J | 1.1 | 0.053 | | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 1.1 | U | 1.1 | 0.053 | | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.053 | | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.058 | J | 1.1 | 0.053 | | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.022 | J | 0.053 | 0.011 | | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.032 | J | 0.053 | 0.011 | | 1 |
| 12971 | Morpholine | 110-91-8 | 21 | U | 21 | 21 | | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.11 | | 0.053 | 0.032 | | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 | U | 0.053 | 0.011 | | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.053 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 12971 | Phenanthrene | 85-01-8 | 0.053 | U | 0.053 | 0.032 | | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 | U | 0.053 | 0.011 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1-methylnaphthalene | | | | | | | |
| | Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported. | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 13022 | Formaldehyde | 50-00-0 | 50 | U | 50 | 30 | | 1 |
| **Explosives** | **SW-846 8330A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10131 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 0.60 | U | 0.60 | 0.30 | 10000000 | 1 |
| 10131 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 1,3-Dinitrobenzene | 99-65-0 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Dinitrotoluene | 121-14-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Dinitrotoluene | 606-20-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | HMX | 2691-41-0 | 2.0 | U | 2.0 | 0.65 | 10000000 | 1 |
| 10131 | Nitrobenzene | 98-95-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Nitroglycerin | 55-63-0 | 15 | U | 15 | 5.2 | 10000000 | 1 |
| 10131 | 2-Nitrotoluene | 88-72-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 3-Nitrotoluene | 99-08-1 | 1.2 | U | 1.2 | 0.40 | 10000000 | 1 |
| 10131 | 4-Nitrotoluene | 99-99-0 | 1.2 | U | 1.2 | 0.60 | 10000000 | 1 |
| 10131 | PETN | 78-11-5 | 18 | U | 18 | 6.0 | 10000000 | 1 |
| 10131 | RDX | 121-82-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Explosives** | **SW-846 8330A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10131 | Tetryl | 479-45-8 | 0.60 | U | 0.60 | 0.40 | 10000000 | 1 |
| 10131 | 1,3,5-Trinitrobenzene | 99-35-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4,6-Trinitrotoluene | 118-96-7 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10407 | 2,4-D | 94-75-7 | 0.51 | U | 0.51 | 0.16 | | 1 |
| 10407 | Dalapon | 75-99-0 | 1.3 | U | 1.3 | 0.25 | | 1 |
| 10407 | 2,4-DB | 94-82-6 | 1.0 | U | 1.0 | 0.31 | | 1 |
| 10407 | Dicamba | 1918-00-9 | 0.31 | U | 0.31 | 0.082 | | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.51 | U | 0.51 | 0.12 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.51 | U | 0.51 | 0.16 | | 1 |
| 10407 | MCPA | 94-74-6 | 200 | U | 200 | 51 | | 1 |
| 10407 | MCPP | 93-65-2 | 200 | U | 200 | 51 | | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.051 | U | 0.051 | 0.015 | | 1 |
| 10407 | 2,4,5-TP | 93-72-1 | 0.051 | U | 0.051 | 0.010 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0089 | U | 0.0089 | 0.0018 | | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0089 | U | 0.0089 | 0.0027 | | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0089 | U | 0.0089 | 0.0030 | | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0089 | U | 0.0089 | 0.0018 | | 1 |
| 10589 | Chlordane | 57-74-9 | 0.44 | U | 0.44 | 0.14 | | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.018 | U | 0.018 | 0.0044 | | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.018 | U | 0.018 | 0.0044 | | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.018 | U | 0.018 | 0.0046 | | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0089 | U | 0.0089 | 0.0030 | | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.018 | U | 0.018 | 0.0047 | | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0089 | U | 0.0089 | 0.0038 | | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.018 | U | 0.018 | 0.013 | | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.018 | U | 0.018 | 0.0084 | | 1 |
| 10589 | Endrin | 72-20-8 | 0.018 | U | 0.018 | 0.0072 | | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.088 | U | 0.088 | 0.018 | | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.018 | U | 0.018 | 0.0044 | | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0089 | U | 0.0089 | 0.0018 | | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0089 | U | 0.0089 | 0.0020 | | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.088 | U | 0.088 | 0.027 | | 1 |
| 10589 | Mirex | 2385-85-5 | 0.050 | U | 0.050 | 0.050 | | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.88 | U | 0.88 | 0.27 | | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.083 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.092 | | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.13 | | 1 |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 12926 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Propylene glycol | 57-55-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 8.0 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10319 | m-Terphenyl | 92-06-8 | 0.0051 | U | 0.0051 | 0.0020 | | 1 |
| 10319 | o-Terphenyl | 84-15-1 | 0.0051 | U | 0.0051 | 0.0020 | | 1 |
| 10319 | p-Terphenyl | 92-94-4 | 0.0051 | U | 0.0051 | 0.0020 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.50 | U | 0.50 | 0.10 | | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.50 | U | 0.50 | 0.10 | | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0084 | | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00076 | | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 | U | 0.400 | 0.0334 | | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0016 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.0110 J | 0.100 | 0.0084 | | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | | 1 |
| **Wet Chemistry** | **EPA 300.0** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 01505 | 1b Anions by 300.0-Bromide | 24959-67-9 | 0.50 U | 0.50 | 0.40 | | 1 |
| 00224 | 1b Anions by 300.0-Chloride | 16887-00-6 | 0.40 U | 0.40 | 0.20 | | 1 |
| 01504 | 1b Anions by 300.0-Fluoride | 16984-48-8 | 0.10 U | 0.10 | 0.080 | | 1 |
| 00368 | 1b Anions by 300.0-Nitrate | 14797-55-8 | 0.10 U | 0.10 | 0.050 | | 1 |
| 01506 | 1b Anions by 300.0-Nitrite | 14797-65-0 | 0.10 U | 0.10 | 0.080 | | 1 |
| 07322 | 1b Anions by 300.0-Orthophosph | 7723-14-0 | 0.50 U | 0.50 | 0.20 | | 1 |
| | The holding time was not met. | | | | | | |
| 00228 | 1b Anions by 300.0-Sulfate | 14808-79-8 | 1.0 U | 1.0 | 0.30 | | 1 |
| | **EPA 351.2** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00217 | 26b Total Kjeldahl Nitrogen | n.a. | 1.0 U | 1.0 | 0.50 | | 1 |
| | **EPA 365.1** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00345 | 1b Phosphate | 14265-44-2 | 0.31 U | 0.31 | 0.25 | | 1 |
| | **SM 4500 N-1999** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 06165 | 27b Total Nitrogen | n.a. | 1.0 U | 1.0 | 0.50 | | 1 |
| | **SM 5310 C-2000** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00273 | 25b Total Organic Carbon 415.1 | n.a. | 1.0 U | 1.0 | 0.50 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 7199** | | ug/l | | ug/l | ug/l | ug/l | |
| 06467 | 2b Chromium VI by EPA 7199 | 18540-29-9 | 10.0 | U | 10.0 | 5.0 | | 1 |
| | **SW-846 9040C** | | Std. Units | | Std. Units | Std. Units | Std. Units | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.4 | | 0.010 | 0.010 | | 1 |

The sample was analyzed outside of the project required holding time of 48 hours.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.98 | U | 1.98 | 0.272 | | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.90 | U | 9.90 | 0.230 | | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.90 | U | 9.90 | 0.129 | | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.90 | U | 9.90 | 0.129 | | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.90 | U | 9.90 | 0.122 | | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 1.23 | JBQ | 9.90 | 0.142 | | 1 |
| 10915 | OCDD | 3268-87-9 | 6.37 | JBQ | 19.8 | 0.209 | | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.98 | U | 1.98 | 0.190 | | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.333 | JBQ | 9.90 | 0.110 | | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 9.90 | U | 9.90 | 0.102 | | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.108 | JBQ | 9.90 | 0.100 | | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 9.90 | U | 9.90 | 0.0972 | | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.182 | JQ | 9.90 | 0.101 | | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.188 | JBQ | 9.90 | 0.0902 | | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.176 | JBQ | 9.90 | 0.0588 | | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.328 | JBQ | 9.90 | 0.0704 | | 1 |
| 10915 | OCDF | 39001-02-0 | 0.531 | JBQ | 19.8 | 0.166 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | U | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 82 | 24 - 169 |
| 13C12-12378-PeCDF | 88 | 24 - 185 |
| 13C12-23478-PeCDF | 88 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 90 | 28 - 136 |
| 13C12-123789-HxCDF | 93 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 85 | 26 - 138 |
| 13C12-OCDF | 81 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

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**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 12:47 | Sarah A Guill | 1 |
| 00527 | 13b 1,4-Dioxane by 8260B SIM | SW-846 8260B SIM | 1 | E141442AA | 05/24/2014 19:36 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | E141442AA | 05/24/2014 19:36 | Kevin A Sposito | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 2 | Y141471AA | 05/27/2014 12:47 | Sarah A Guill | 1 |
| 10461 | 8b SVOCs by EPA 8270D | SW-846 8270D | 1 | 14144WAO026 | 05/29/2014 19:03 | Chad A Moline | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14144WAN026 | 06/03/2014 08:27 | Brian K Graham | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14144WAN026 | 05/27/2014 10:30 | Anna E Stager | 1 |
| 11010 | 8270D BNA Extraction | SW-846 3510C | 1 | 14144WAO026 | 05/27/2014 10:30 | Anna E Stager | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14142A94A | 05/27/2014 15:26 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14142A94A | 05/27/2014 15:26 | Marie D Beamenderfer | 1 |
| 13022 | 19b Formaldehyde 8315A | SW-846 8315A | 1 | 141430009A | 05/25/2014 20:27 | James H Place | 1 |
| 10131 | 18b Energetics by 8330A | SW-846 8330A | 1 | 141470007A | 05/29/2014 01:09 | James H Place | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 141470029A | 05/30/2014 04:30 | Matthew S Listner | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141470003A | 05/27/2014 18:42 | Richard A Shober | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 141470014A | 05/29/2014 07:35 | Lisa A Reinert | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141480020A | 05/29/2014 17:47 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141480020A | 05/28/2014 21:30 | Karen L Beyer | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 141470014A | 05/27/2014 16:00 | Seth A Farrier | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 141470029A | 05/28/2014 15:30 | Seth A Farrier | 1 |
| 01013 | Formaldehyde Extraction | SW-846 8315A | 1 | 141430009A | 05/24/2014 12:30 | David V Hershey Jr | 1 |
| 11122 | Energetics Extraction | SW-846 8330 | 1 | 141470007A | 05/27/2014 18:30 | Kelli M Barto | 1 |
| 12926 | 20b Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141480034A | 05/28/2014 19:57 | Tyler O Griffin | 1 |
| 10319 | 23b Terphenyls by 8015B | SW-846 8015B | 1 | 141470010A | 06/03/2014 00:29 | Glorines Suarez-Rivera | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440025A | 05/27/2014 23:42 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141440024A | 05/28/2014 11:35 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141440024A | 05/27/2014 08:00 | Kerrie A Freeburn | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141440025A | 05/27/2014 08:00 | Kerrie A Freeburn | 1 |

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**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10304 | Terphenyls water prep | SW-846 3510C | 1 | 141470010A | 05/27/2014 17:00 | JoElla L Rice | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148001 | 05/31/2014 07:50 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14148001 | 05/28/2014 10:15 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:02 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141480639002B | 05/29/2014 22:45 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:45 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:45 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:45 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141475713004 | 05/29/2014 08:30 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141480635002 | 05/29/2014 10:10 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141480639002 | 05/29/2014 09:22 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141475713004 | 05/28/2014 09:00 | James L Mertz | 1 |
| 01505 | 1b Anions by 300.0-Bromide | EPA 300.0 | 1 | 14142347602C | 05/30/2014 14:01 | Clinton M Wilson | 1 |
| 00224 | 1b Anions by 300.0-Chloride | EPA 300.0 | 1 | 14142347602C | 05/30/2014 14:01 | Clinton M Wilson | 1 |
| 01504 | 1b Anions by 300.0-Fluoride | EPA 300.0 | 1 | 14142347602C | 05/30/2014 14:01 | Clinton M Wilson | 1 |
| 00368 | 1b Anions by 300.0-Nitrate | EPA 300.0 | 1 | 14142347602C | 05/23/2014 04:31 | Sandra J Miller | 1 |
| 01506 | 1b Anions by 300.0-Nitrite | EPA 300.0 | 1 | 14142347602C | 05/23/2014 04:31 | Sandra J Miller | 1 |

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**Sample Description: FB-052114 Water**
**SSFL Phase 3**

**LL Sample # WW 7472961**
**LL Group # 1476280**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:00 by PH

Submitted: 05/22/2014 09:25
Reported: 06/13/2014 16:52

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

FB521 SDG#: PH191-01FB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07322 | 1b Anions by 300.0-Orthophosph | EPA 300.0 | 1 | 14142347602C | 05/30/2014 14:01 | Clinton M Wilson | 1 |
| 00228 | 1b Anions by 300.0-Sulfate | EPA 300.0 | 1 | 14142347602C | 05/30/2014 14:01 | Clinton M Wilson | 1 |
| 00217 | 26b Total Kjeldahl Nitrogen | EPA 351.2 | 1 | 14150108101A | 06/02/2014 12:05 | Joseph E McKenzie | 1 |
| 00345 | 1b Phosphate | EPA 365.1 | 1 | 14148110101A | 05/30/2014 18:30 | Venia B McFadden | 1 |
| 06165 | 27b Total Nitrogen | SM 4500 N-1999 | 1 | 14150108101A | 06/02/2014 12:05 | Joseph E McKenzie | 1 |
| 00273 | 25b Total Organic Carbon 415.1 | SM 5310 C-2000 | 1 | 14147049502A | 05/27/2014 05:07 | James S Mathiot | 1 |
| 06467 | 2b Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14142987301A | 05/22/2014 11:29 | Clinton M Wilson | 1 |
| 01460 | Total Kjeldahl Nitrogen Digest | EPA 351.2 | 1 | 14150108101A | 05/30/2014 10:15 | Nancy J Shoop | 1 |
| 08264 | Total Phos as PO4 Prep (water) | EPA 365.1 | 1 | 14148110101A | 05/28/2014 13:00 | Nancy J Shoop | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14147002102A | 05/27/2014 17:20 | Michele L Graham | 1 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: E141442AA | Sample number(s): 7472961 | | | | | | | | | |
| 1,4-Dioxane | 2.0 | U | 2.0 | 0.5 | ug/l | 107 | 111 | 80-123 | 4 | 30 |
| Batch number: Y141471AA | Sample number(s): 7472961 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14144WAN026 | Sample number(s): 7472961 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 107 | 83-119 | 6 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 101 | 81-130 | 6 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 103 | 83-125 | 7 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 100 | 79-122 | 6 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 94 | 100 | 80-121 | 6 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 108 | 79-136 | 6 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 103 | 67-118 | 7 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 91 | 97 | 72-132 | 7 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 100 | 81-131 | 5 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 90 | 96 | 40-138 | 7 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 100 | 100 | 64-141 | 0 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 97 | 101 | 84-118 | 4 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 81 | 89 | 66-133 | 10 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 96 | 103 | 64-137 | 6 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 94 | 100 | 23-139 | 7 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.056 | J | 1.0 | 0.050 | ug/l | 160* | 72 | 70-143 | 77* | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 89 | 94 | 84-124 | 6 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 90 | 96 | 82-119 | 6 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 85 | 93 | 68-132 | 8 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 84* | 89 | 86-130 | 5 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 83 | 87 | 81-131 | 5 | 30 |
| Morpholine | 20 | U | 20. | 20 | ug/l | | | | | |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 88 | 93 | 82-122 | 5 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 62 | 68 | 56-96 | 9 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 59 | 63 | 57-145 | 6 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 92 | 98 | 83-116 | 6 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 107 | 78-125 | 7 | 30 |
| | | | | | | | | | | |
| Batch number: 14144WAO026 | Sample number(s): 7472961 | | | | | | | | | |
| Acenaphthene | 0.5 | U | 0.5 | 0.1 | ug/l | 98 | 97 | 80-112 | 0 | 30 |
| Acenaphthylene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 104 | 84-125 | 0 | 30 |
| Aniline | 1 | U | 1. | 0.5 | ug/l | 60 | 58 | 43-94 | 4 | 30 |
| Anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 99 | 99 | 82-116 | 0 | 30 |
| Benzidine | 60 | U | 60. | 20 | ug/l | 44 | 43 | 20-94 | 4 | 30 |
| Benzo(a)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 100 | 103 | 81-126 | 3 | 30 |
| Benzo(a)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 104 | 102 | 82-116 | 2 | 30 |
| Benzo(b)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 106 | 82-121 | 1 | 30 |
| Benzo(g,h,i)perylene | 0.5 | U | 0.5 | 0.1 | ug/l | 106 | 104 | 76-128 | 1 | 30 |
| Benzo(k)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 101 | 99 | 81-122 | 1 | 30 |
| Benzoic acid | 15 | U | 15. | 6 | ug/l | 37 | 42 | 10-97 | 14 | 30 |
| Benzyl alcohol | 15 | U | 15. | 10 | ug/l | 80 | 81 | 66-112 | 1 | 30 |
| 1,1'-Biphenyl | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 78-109 | 1 | 30 |
| 4-Bromophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 82-118 | 1 | 30 |
| Butylbenzylphthalate | 5 | U | 5. | 2 | ug/l | 91 | 95 | 79-119 | 4 | 30 |
| Di-n-butylphthalate | 5 | U | 5. | 2 | ug/l | 93 | 94 | 80-119 | 1 | 30 |
| Carbazole | 1 | U | 1. | 0.5 | ug/l | 97 | 96 | 84-117 | 0 | 30 |
| 4-Chloro-3-methylphenol | 1 | U | 1. | 0.5 | ug/l | 88 | 87 | 80-123 | 1 | 30 |
| 4-Chloroaniline | 1 | U | 1. | 0.5 | ug/l | 78 | 75 | 55-113 | 4 | 30 |
| bis(2-Chloroethoxy)methane | 1 | U | 1. | 0.5 | ug/l | 87 | 86 | 77-115 | 2 | 30 |
| bis(2-Chloroethyl)ether | 1 | U | 1. | 0.5 | ug/l | 81 | 81 | 78-112 | 0 | 30 |
| bis(2-Chloroisopropyl)ether | 1 | U | 1. | 0.5 | ug/l | 79 | 78 | 56-119 | 1 | 30 |
| 2-Chloronaphthalene | 1 | U | 1. | 0.4 | ug/l | 92 | 94 | 71-120 | 2 | 30 |
| 2-Chlorophenol | 1 | U | 1. | 0.5 | ug/l | 79 | 79 | 76-111 | 1 | 30 |
| 4-Chlorophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 77-114 | 1 | 30 |
| Chrysene | 0.5 | U | 0.5 | 0.1 | ug/l | 103 | 105 | 81-120 | 2 | 30 |
| Dibenz(a,h)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 106 | 83-124 | 1 | 30 |
| Dibenzofuran | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 81-110 | 1 | 30 |
| 1,2-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 90 | 90 | 69-107 | 0 | 30 |
| 1,3-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 85 | 84 | 69-107 | 1 | 30 |
| 1,4-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 87 | 86 | 66-111 | 1 | 30 |
| 3,3'-Dichlorobenzidine | 5 | U | 5. | 2 | ug/l | 60 | 62 | 47-108 | 3 | 30 |
| 2,4-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 92 | 89 | 84-119 | 4 | 30 |
| 2,6-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 84 | 105 | 80-116 | 22 | 30 |
| Diethylphthalate | 5 | U | 5. | 2 | ug/l | 96 | 96 | 70-118 | 0 | 30 |
| 2,4-Dimethylphenol | 1 | U | 1. | 0.5 | ug/l | 85 | 83 | 81-114 | 2 | 30 |
| 3,5-Dimethylphenol | 10 | U | 10. | 3 | ug/l | | | | | |
| Dimethylphthalate | 5 | U | 5. | 2 | ug/l | 91 | 91 | 43-128 | 1 | 30 |
| 4,6-Dinitro-2-methylphenol | 15 | U | 15. | 5 | ug/l | 76 | 85 | 56-145 | 11 | 30 |
| 2,4-Dinitrophenol | 30 | U | 30. | 10 | ug/l | 59 | 67 | 32-148 | 13 | 30 |
| 1,2-Diphenylhydrazine | 1 | U | 1. | 0.5 | ug/l | 81 | 82 | 74-124 | 1 | 30 |
| bis(2-Ethylhexyl)phthalate | 5 | U | 5. | 2 | ug/l | 91 | 94 | 78-124 | 4 | 30 |
| Fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 102 | 102 | 82-121 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluorene | 0.5 | U | 0.5 | 0.1 | ug/l | 99 | 100 | 80-117 | 1 | 30 |
| Hexachlorobenzene | 0.5 | U | 0.5 | 0.1 | ug/l | 86 | 88 | 80-119 | 2 | 30 |
| Hexachlorobutadiene | 1 | U | 1. | 0.5 | ug/l | 102 | 98 | 61-120 | 4 | 30 |
| Hexachlorocyclopentadiene | 15 | U | 15. | 5 | ug/l | 64 | 65 | 28-133 | 2 | 30 |
| Hexachloroethane | 5 | U | 5. | 1 | ug/l | 78 | 77 | 55-109 | 1 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 103 | 102 | 80-126 | 1 | 30 |
| Isophorone | 1 | U | 1. | 0.5 | ug/l | 95 | 93 | 82-119 | 2 | 30 |
| 1-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 94 | 93 | 83-116 | 1 | 30 |
| 2-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 93 | 92 | 75-106 | 1 | 30 |
| 2-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 79 | 79 | 72-111 | 0 | 30 |
| 4-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 75 | 74 | 63-110 | 1 | 30 |
| Naphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 93 | 93 | 75-108 | 0 | 30 |
| NDPA as diphenylamine | 5 | U | 5. | 2 | ug/l | 85 | 86 | 70-130 | 1 | 30 |
| 2-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 95 | 99 | 84-122 | 5 | 30 |
| 3-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 82 | 82 | 70-118 | 0 | 30 |
| 4-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 79 | 79 | 66-110 | 1 | 30 |
| Nitrobenzene | 1 | U | 1. | 0.5 | ug/l | 90 | 89 | 77-119 | 1 | 30 |
| 2-Nitrophenol | 1 | U | 1. | 0.5 | ug/l | 82 | 88 | 81-128 | 7 | 30 |
| 4-Nitrophenol | 30 | U | 30. | 10 | ug/l | 44 | 45 | 25-95 | 2 | 30 |
| N-Nitroso-di-n-propylamine | 1 | U | 1. | 0.5 | ug/l | 82 | 83 | 71-117 | 1 | 30 |
| N-Nitrosodimethylamine | 5 | U | 5. | 2 | ug/l | 52 | 54 | 38-98 | 3 | 30 |
| N-Nitrosodiphenylamine | 1 | U | 1. | 0.5 | ug/l | 85 | 86 | 80-115 | 1 | 30 |
| Di-n-octylphthalate | 5 | U | 5. | 2 | ug/l | 105 | 105 | 78-129 | 0 | 30 |
| Pentachlorophenol | 5 | U | 5. | 1 | ug/l | 83 | 86 | 54-124 | 3 | 30 |
| Phenanthrene | 0.5 | U | 0.5 | 0.1 | ug/l | 94 | 97 | 81-114 | 3 | 30 |
| Phenol | 1 | U | 1. | 0.5 | ug/l | 45 | 46 | 31-79 | 3 | 30 |
| Pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 95 | 96 | 81-112 | 2 | 30 |
| Pyridine | 5 | U | 5. | 2 | ug/l | 51 | 48 | 22-96 | 6 | 30 |
| 1,2,4-Trichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 101 | 99 | 77-111 | 2 | 30 |
| 2,4,5-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 95 | 95 | 81-121 | 0 | 30 |
| 2,4,6-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 84-119 | 2 | 30 |
| Batch number: 14142A94A | Sample number(s): 7472961 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 109 | 111 | 80-133 | 2 | 30 |
| Batch number: 141430009A | Sample number(s): 7472961 | | | | | | | | | |
| Formaldehyde | 50 | U | 50. | 30 | ug/l | 98 | 100 | 67-117 | 2 | 30 |
| Batch number: 141470007A | Sample number(s): 7472961 | | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.30 | ug/l | 102 | 103 | 80-148 | 1 | 30 |
| 2-Amino-4,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 90 | 90 | 77-115 | 1 | 30 |
| 2,6-Diamino-4-nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 83 | 83 | 73-121 | 0 | 30 |
| 2,4-Diamino-6-nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 82 | 82 | 72-119 | 0 | 30 |
| 1,3-Dinitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 95 | 97 | 85-117 | 2 | 30 |
| 2,4-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 96 | 96 | 83-115 | 0 | 30 |
| 2,6-Dinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 95 | 96 | 77-145 | 1 | 30 |
| HMX | 2.0 | U | 2.0 | 0.65 | ug/l | 99 | 100 | 67-115 | 1 | 30 |
| Nitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 92 | 93 | 80-115 | 1 | 30 |
| Nitroglycerin | 15 | U | 15. | 5.2 | ug/l | 90 | 92 | 81-115 | 1 | 30 |
| 2-Nitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 94 | 96 | 74-115 | 2 | 30 |
| 3-Nitrotoluene | 1.2 | U | 1.2 | 0.40 | ug/l | 102 | 105 | 83-118 | 3 | 30 |
| 4-Nitrotoluene | 1.2 | U | 1.2 | 0.60 | ug/l | 93 | 94 | 76-120 | 2 | 30 |
| PETN | 18 | U | 18. | 6.0 | ug/l | 100 | 106 | 81-115 | 5 | 30 |
| RDX | 0.60 | U | 0.60 | 0.20 | ug/l | 89 | 92 | 76-120 | 4 | 30 |
| Tetryl | 0.60 | U | 0.60 | 0.40 | ug/l | 71 | 73 | 47-150 | 3 | 30 |
| 1,3,5-Trinitrobenzene | 0.60 | U | 0.60 | 0.20 | ug/l | 111 | 106 | 83-115 | 4 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,6-Trinitrotoluene | 0.60 | U | 0.60 | 0.20 | ug/l | 92 | 93 | 84-117 | 1 | 30 |
| Batch number: 141470029A | Sample number(s): 7472961 | | | | | | | | | |
| 2,4-D | 0.50 | U | 0.50 | 0.16 | ug/l | 138 | 135 | 68-155 | 2 | 30 |
| Dalapon | 1.3 | U | 1.3 | 0.25 | ug/l | 82 | 77 | 27-127 | 6 | 30 |
| 2,4-DB | 1.0 | U | 1.0 | 0.30 | ug/l | 124 | 122 | 60-172 | 1 | 30 |
| Dicamba | 0.30 | U | 0.30 | 0.080 | ug/l | 135 | 132 | 65-142 | 2 | 30 |
| Dinoseb | 0.50 | U | 0.50 | 0.12 | ug/l | 76 | 74 | 16-163 | 4 | 30 |
| 2,4-DP (Dichlorprop) | 0.50 | U | 0.50 | 0.16 | ug/l | 163 | 165 | 91-181 | 1 | 30 |
| MCPA | 200 U | | 200. | 50 | ug/l | 119 | 116 | 65-128 | 3 | 30 |
| MCPP | 200 U | | 200. | 50 | ug/l | 132 | 129 | 61-145 | 2 | 30 |
| 2,4,5-T | 0.050 | U | 0.050 | 0.015 | ug/l | 139 | 136 | 67-163 | 2 | 30 |
| 2,4,5-TP | 0.050 | U | 0.050 | 0.010 | ug/l | 132 | 128 | 71-162 | 3 | 30 |
| Batch number: 141470003A | Sample number(s): 7472961 | | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 | U | 1.0 | 0.20 | ug/l | 96 | | 85-115 | | |
| Batch number: 141470014A | Sample number(s): 7472961 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 77 | 83 | 37-137 | 8 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 93 | 96 | 44-148 | 3 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 97 | 98 | 48-147 | 1 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 95 | 96 | 44-146 | 0 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 96 | 98 | 44-152 | 2 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 92 | 95 | 44-146 | 4 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 85 | 90 | 44-146 | 5 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 97 | 100 | 47-146 | 3 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 94 | 93 | 45-146 | 1 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 87 | 87 | 39-140 | 0 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 95 | 97 | 45-139 | 2 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 97 | 99 | 48-139 | 3 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 91 | 91 | 43-139 | 1 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 92 | 94 | 43-144 | 2 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 98 | 98 | 42-152 | 1 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 83 | 87 | 36-146 | 4 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 95 | 94 | 49-142 | 1 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 84 | 87 | 40-150 | 3 | 30 |
| Mirex | 0.040 | U | 0.040 | 0.0080 | ug/l | | | | | |
| Toxaphene | 0.80 | U | 0.80 | 0.24 | ug/l | | | | | |
| Batch number: 141480020A | Sample number(s): 7472961 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 76 | 69 | 34-115 | 10 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 99 | 99 | 60-117 | 0 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 106 | 106 | 67-128 | 0 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141480034A | Sample number(s): 7472961 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 8.0 | mg/l | 94 | | 46-143 | | |
| Ethylene glycol | 10 | U | 10. | 8.0 | mg/l | 94 | | 63-128 | | |
| Propylene glycol | 10 | U | 10. | 8.0 | mg/l | 99 | | 62-136 | | |
| Triethylene glycol | 10 | U | 10. | 8.0 | mg/l | 92 | | 31-136 | | |
| Batch number: 141440024A | Sample number(s): 7472961 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 75 | 74 | 67-109 | 2 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 80 | 80 | 71-119 | 0 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 80 | 80 | 75-117 | 0 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 79 | 78 | 44-134 | 2 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 58 | 56 | 55-86 | 3 | 30 |
| Batch number: 141440025A | Sample number(s): 7472961 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 85 | 85 | 67-109 | 0 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 91 | 71-119 | 1 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 94 | 75-117 | 4 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 82 | 84 | 44-134 | 3 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 71 | 70 | 55-86 | 1 | 30 |
| Batch number: 141470010A | Sample number(s): 7472961 | | | | | | | | | |
| m-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 89 | 88 | 61-108 | 1 | 20 |
| o-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 88 | 87 | 75-125 | 1 | 20 |
| p-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 83 | 83 | 63-110 | 1 | 20 |
| Batch number: 141475713004 | Sample number(s): 7472961 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006 0 | mg/l | 105 | 97 | 90-115 | 8 | 20 |
| Batch number: 141480635002 | Sample number(s): 7472961 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 105 | 105 | 90-112 | 0 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 97 | 96 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 105 | 105 | 90-113 | 0 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 107 | 104 | 90-110 | 3 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 102 | 100 | 90-111 | 2 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 98 | 97 | 90-110 | 1 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 107 | 106 | 90-112 | 2 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 108 | 107 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 107 | 106 | 90-112 | 1 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 110 | 108 | 88-116 | 2 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 106 | 104 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 104 | 102 | 89-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 105 | 104 | 90-110 | 1 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0015 | mg/l | 111 | 109 | 90-111 | 2 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0418 | mg/l | 103 | 103 | 90-110 | 1 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.0980 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 102 | 101 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 106 | 104 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0020 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Zinc | 0.0400 | U | 0.0400 | 0.0020 | mg/l | 105 | 103 | 90-110 | 2 | 20 |
| Zirconium | 0.0110 | J | 0.100 | 0.0084 | mg/l | 104 | 103 | 90-110 | 1 | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141480639002A | Sample number(s): 7472961 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 112 | 104 | 90-115 | 8 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 106 | 103 | 90-110 | 3 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 108 | 100 | 90-115 | 7 | 20 |
| Batch number: 141480639002B | Sample number(s): 7472961 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 103 | 100 | 90-114 | 3 | 20 |
| Batch number: 14142347602C | Sample number(s): 7472961 | | | | | | | | |
| 1b Anions by 300.0-Bromide | 0.50 U | 0.50 | 0.40 | mg/l | 96 | 96 | 90-110 | 0 | 20 |
| 1b Anions by 300.0-Chloride | 0.40 U | 0.40 | 0.20 | mg/l | 98 | 98 | 90-110 | 0 | 20 |
| 1b Anions by 300.0-Fluoride | 0.10 U | 0.10 | 0.080 | mg/l | 98 | 97 | 90-110 | 1 | 20 |
| 1b Anions by 300.0-Nitrate | 0.10 U | 0.10 | 0.050 | mg/l | 98 | 98 | 90-110 | 0 | 20 |
| 1b Anions by 300.0-Nitrite | 0.10 U | 0.10 | 0.080 | mg/l | 95 | 95 | 90-110 | 0 | 20 |
| 1b Anions by 300.0-Orthophosph | 0.50 U | 0.50 | 0.20 | mg/l | 98 | 97 | 90-110 | 1 | 20 |
| 1b Anions by 300.0-Sulfate | 1.0 U | 1.0 | 0.30 | mg/l | 98 | 97 | 90-110 | 0 | 20 |
| Batch number: 14142987301A | Sample number(s): 7472961 | | | | | | | | |
| 2b Chromium VI by EPA 7199 | 10.0 U | 10.0 | 5.0 | ug/l | 103 | 104 | 90-110 | 1 | 20 |
| Batch number: 14147049502A | Sample number(s): 7472961 | | | | | | | | |
| 25b Total Organic Carbon 415.1 | 1.0 U | 1.0 | 0.50 | mg/l | 110 | | 91-113 | | |
| Batch number: 14148110101A | Sample number(s): 7472961 | | | | | | | | |
| 1b Phosphate | 0.31 U | 0.31 | 0.25 | mg/l | 91 | | 90-110 | | |
| Batch number: 14150108101A | Sample number(s): 7472961 | | | | | | | | |
| 26b Total Kjeldahl Nitrogen | 1.0 U | 1.0 | 0.50 | mg/l | 102 | | 90-110 | | |
| Batch number: 14147002102A | Sample number(s): 7472961 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 100 | | 90-110 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14148001 | Sample number(s): 7472961 | | | | | | | | |
| 2378-TCDD | 2.00 U | 2.00 | 0.283 | pg/l | 99 | | 60-150 | | |
| 12378-PeCDD | 10.0 U | 10.0 | 0.243 | pg/l | 97 | | 60-150 | | |
| 123478-HxCDD | 0.213 J | 10.0 | 0.136 | pg/l | 97 | | 60-150 | | |
| 123678-HxCDD | 0.251 J | 10.0 | 0.140 | pg/l | 95 | | 60-150 | | |
| 123789-HxCDD | 0.159 J | 10.0 | 0.128 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDD | 0.923 J | 10.0 | 0.166 | pg/l | 95 | | 60-150 | | |
| OCDD | 7.17 J | 20.0 | 0.260 | pg/l | 95 | | 60-150 | | |
| 2378-TCDF | 2.00 U | 2.00 | 0.184 | pg/l | 96 | | 60-150 | | |
| 12378-PeCDF | 0.603 J | 10.0 | 0.115 | pg/l | 96 | | 60-150 | | |
| 23478-PeCDF | 10.0 U | 10.0 | 0.111 | pg/l | 98 | | 60-150 | | |
| 123478-HxCDF | 0.316 J | 10.0 | 0.103 | pg/l | 101 | | 60-150 | | |
| 123678-HxCDF | 10.0 U | 10.0 | 0.0917 | pg/l | 99 | | 60-150 | | |
| 123789-HxCDF | 10.0 U | 10.0 | 0.0931 | pg/l | 99 | | 60-150 | | |
| 234678-HxCDF | 0.178 J | 10.0 | 0.0905 | pg/l | 97 | | 60-150 | | |
| 1234678-HpCDF | 0.283 J | 10.0 | 0.0667 | pg/l | 98 | | 60-150 | | |
| 1234789-HpCDF | 0.365 J | 10.0 | 0.0848 | pg/l | 97 | | 60-150 | | |
| OCDF | 0.452 J | 20.0 | 0.187 | pg/l | 96 | | 60-150 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0648 | | | pg/l | | | | | |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141470003A | Sample number(s): 7472961 | | | UNSPK: 7472961 | | | | | | | |
| 6b Perchlorate (Method 6850) | 96 | 92 | 80-120 | 4 | 20 | | | | | | |
| Batch number: 141480034A | Sample number(s): 7472961 | | | UNSPK: 7472961 | | | | | | | |
| Diethylene glycol | 102 | 113 | 50-166 | 10 | 20 | | | | | | |
| Ethylene glycol | 88 | 115 | 50-155 | 26* | 20 | | | | | | |
| Propylene glycol | 92 | 123 | 54-145 | 29* | 20 | | | | | | |
| Triethylene glycol | 99 | 112 | 50-133 | 12 | 20 | | | | | | |
| Batch number: 14147049502A | Sample number(s): 7472961 | | | UNSPK: P473778 | | BKG: P473778 | | | | | |
| 25b Total Organic Carbon 415.1 | 118 | | 63-142 | | | 0.80 | J | 0.62 | J | 26* (1) | 4 |
| Batch number: 14148110101A | Sample number(s): 7472961 | | | UNSPK: P472428 | | BKG: P472428 | | | | | |
| 1b Phosphate | 103 | | 90-110 | | | 0.27 | J | 0.33 | | 22* (1) | 4 |
| Batch number: 14150108101A | Sample number(s): 7472961 | | | UNSPK: P471561 | | BKG: P471561 | | | | | |
| 26b Total Kjeldahl Nitrogen | 105 | | 90-110 | | | 1.0 | U | 1.0 | U | 0 (1) | 20 |
| Batch number: 14147002102A | Sample number(s): 7472961 | | | BKG: P474252 | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 5.8 | | 5.8 | | 0 | 3 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 13b 1,4-Dioxane by 8260B SIM
Batch number: E141442AA

| | Toluene-d8 |
|---|---|
| 7472961 | 92 |
| Blank | 94 |
| LCS | 94 |
| LCSD | 94 |
| Limits: | 80-120 |

Analysis Name: 12b Volatile Organics EPA8260B

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

## Surrogate Quality Control

Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7472961 | 102 | 102 | 98 | 96 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14144WAN026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7472961 | 85 | 97 | 75 |
| Blank | 80 | 92 | 72 |
| LCS | 92 | 106 | 84 |
| LCSD | 98 | 114 | 89 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 8b SVOCs by EPA 8270D
Batch number: 14144WAO026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7472961 | 39 | 61 | 79 | 88 | 98 | 96 |
| Blank | 38 | 56 | 71 | 82 | 95 | 89 |
| LCS | 39 | 55 | 75 | 84 | 95 | 57 |
| LCSD | 40 | 54 | 77 | 86 | 95 | 50 |
| Limits: | 20-110 | 20-110 | 30-110 | 40-130 | 45-130 | 45-130 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14142A94A

| | Trifluorotoluene-F |
|---|---|
| 7472961 | 87 |
| Blank | 86 |
| LCS | 97 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 19b Formaldehyde 8315A
Batch number: 141430009A

| | Butyraldehyde |
|---|---|
| 7472961 | 94 |
| Blank | 93 |
| LCS | 95 |
| LCSD | 101 |
| Limits: | 36-155 |

Analysis Name: 18b Energetics by 8330A

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

## Surrogate Quality Control

Batch number: 141470007A

| | 2-Nitro-m-xylene |
|---|---|
| 7472961 | 110 |
| Blank | 116 |
| LCS | 114 |
| LCSD | 114 |
| Limits: | 80-146 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 141470014A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7472961 | 79 | 95 |
| Blank | 71 | 89 |
| LCS | 90 | 92 |
| LCSD | 89 | 94 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 141470029A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7472961 | 100 |
| Blank | 101 |
| LCS | 124 |
| LCSD | 119 |
| Limits: | 50-150 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141480020A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7472961 | 108 | 82 |
| Blank | 120 | 97 |
| LCS | 114 | 88 |
| LCSD | 114 | 86 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141440024A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7472961 | 70 | 76 |
| Blank | 82 | 91 |
| LCS | 68 | 74 |
| LCSD | 66 | 74 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10b TPH by EPA 8015B (DRO)

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

## Surrogate Quality Control

Batch number: 141440025A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7472961 | 72 | 81 |
| Blank | 73 | 85 |
| LCS | 72 | 84 |
| LCSD | 72 | 84 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 23b Terphenyls by 8015B
Batch number: 141470010A

| | n-Triacontane-d62 |
|---|---|
| 7472961 | 102 |
| Blank | 105 |
| LCS | 104 |
| LCSD | 99 |
| Limits: | 36-160 |

Analysis Name: 20b Glycols by EPA 8015C
Batch number: 141480034A

| | Tetramethylene glycol |
|---|---|
| 7472961 | 94 |
| Blank | 87 |
| LCS | 106 |
| MS | 104 |
| MSD | 122 |
| Limits: | 58-141 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14148001

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7472961 | 81 | 84 | 86 | 86 | 87 | 86 |
| Blank | 81 | 82 | 85 | 85 | 89 | 86 |
| OPR | 83 | 87 | 90 | 90 | 88 | 91 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7472961 | 81 | 82 | 88 | 88 | 85 | 86 |
| Blank | 73 | 79 | 83 | 81 | 81 | 84 |
| OPR | 87 | 83 | 88 | 88 | 87 | 90 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7472961 | 90 | 93 | 90 | 85 | 81 |
| Blank | 84 | 91 | 86 | 80 | 71 |
| OPR | 89 | 93 | 92 | 86 | 80 |

*- Outside of specification
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## Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476280
Reported: 06/13/14 at 04:52 PM

### Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/21/2014
CarrierName: FedEx
AirbillNo: 770058142099

A-13013
G-1476280
S-7472961

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140521-06
Cooler #: 4
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FB-052114 | 5/21/14 14:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FB-052114 | 5/21/14 14:00 | WQ | None | 6 - 250 mL Amber | 10 day | | | | | X | X | X | | | X | | | | | | X | | | | | | | | | | X | | | | | | | | |
| FB-052114 | 5/21/14 14:00 | WQ | HCl | 9 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | X | X | X | | | | | | | | | | | | | | | |
| FB-052114 | 5/21/14 14:00 | WQ | None | 7 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | X | | | X | | | | | | | X | | | |
| FB-052114 | 5/21/14 14:00 | WQ | None | 3 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | X | | | | | | | | | X | | | | | | | | | |
| FB-052114 | 5/21/14 14:00 | WQ | HCl | 1 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | |
| FB-052114 | 5/21/14 14:00 | WQ | H2SO4 pH<2 | 2 - 250 mL Poly | 10 day | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | X | | |
| FB-052114 | 5/21/14 14:00 | WQ | H3PO4 pH<2 | 2 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |

SVOCs = biphenyls only. TIC = morpholine only. Nitrates = anions = Cl2, SO4, NO3, NO2, Br2, Ortho-PO4, Fluoride, Phophate

Special Instructions:

**Sampler:** Pam Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/21/2014 | 16:00 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/22/14 | 0925 |

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/21/2014
CarrierName: FedEx
AirbillNo: 770058142099

A-13013
G-147680
S-747296 1

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140521-05
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FB-052114 | 5/21/14 14:00 | WQ | None | 6 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | X | | | | | | | | | X | | | | | | | | | | |
| FB-052114 | 5/21/14 14:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both the extracts for EFH.

**Sampler:** Pam Hartman

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/21/2014 | 16:00 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/22/14 | 0925 |

G# 1476280

## Natalie Luciano

**From:** Hartman, Pamela <HartmanPM@cdmsmith.com>
**Sent:** Friday, May 23, 2014 4:05 PM
**To:** Natalie Luciano; Mysel, Stefanie
**Cc:** Zakowski, Cherie; Burgesser, Todd
**Subject:** RE: PH191: FB - EFH/SVOC TIC

Natalie

Please just do all SVOCs and disregard the "Biphenyls only" comment.

Thanks!
Pam

Pamela Hartman
CDM Smith
523 West Sixth Street Suite 400
Los Angeles, CA 90014
714 900 0916 (Cell)

---

From: Natalie Luciano [NatalieLuciano@eurofinsUS.com]
Sent: Friday, May 23, 2014 12:28 PM
To: Mysel, Stefanie; Hartman, Pamela
Cc: Zakowski, Cherie; Burgesser, Todd
Subject: RE: PH191: FB - EFH/SVOC TIC

I have another question related to the comments on the COC. I don't see a list for "Biphenyls only" in our system files. Is this new? What compound list is needed?

Thanks,
Natalie Luciano
Senior Specialist, Environmental Client Services
Phone: +1 717-556-7258

Note that my email address has changed. It is now natalieluciano@eurofinsus.com. Please update my contact information.

-----Original Message-----
From: Natalie Luciano
Sent: Friday, May 23, 2014 3:18 PM
To: 'Mysel, Stefanie'; Hartman, Pamela
Cc: Zakowski, Cherie; Burgesser, Todd
Subject: RE: PH191: FB - EFH/SVOC TIC

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15293

Group Number(s): 1476280

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/22/2014 9:25 |
| Number of Packages: | 4 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | No | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:54 on 05/22/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 0.8 | DT | Wet | Y | Bagged | N | N |
| 3 | DT131 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 4 | DT131 | 1.0 | DT | Wet | Y | Bagged | N | N |

## Sample Date/Time Discrepancy Details

| Sample ID on COC | Date/Time on Label | Comments |
|---|---|---|
| FDG2-SL-584SA5D-SB-4. 0-5.0 | 5/21/2014 08:18 | 1 16 oz. container |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 05, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/22/2014
Group Number: 1476374
SDG: PH192
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB3-052114 Water | 7473410 |
| SL-686-SA6-TR-0.5 Grab Soil | 7473411 |
| SL-686-SA6-TR-5.0 Grab Soil | 7473412 |
| SL-686-SA6-TR-11.0 Grab Soil | 7473413 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB3-052114 Water**
**SSFL Phase 3 Subarea 6**

**LL Sample # WW 7473410**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:00

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB3-- SDG#: PH192-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/29/2014 22:54 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/29/2014 22:54 | Miranda P Tillinghast | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-686-SA6-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7473411**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:02 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68605 SDG#: PH192-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.64 | J | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 3.9 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 3.7 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 13 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 5.5 | J | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.4 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.9 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 7.6 | J | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 14 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 28 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 16 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.88 | J | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 3.0 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 7.4 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 11 | | 1.7 | 0.68 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 34 | | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.1 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 30 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 55 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-686-SA6-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7473411**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:02 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68605 SDG#: PH192-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 12 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,000 | | 40.5 | 7.31 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.05 | U | 4.05 | 0.750 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.11 | J | 4.05 | 0.709 | 1 |
| 06946 | Barium | 7440-39-3 | 106 | | 1.01 | 0.0334 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.502 | J | 1.01 | 0.0679 | 1 |
| 07914 | Boron | 7440-42-8 | 5.22 | J | 10.1 | 0.851 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.817 | J | 1.01 | 0.0770 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,340 | | 20.3 | 3.38 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.6 | | 3.04 | 0.162 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.15 | | 1.01 | 0.100 | 1 |
| 06953 | Copper | 7440-50-8 | 14.4 | | 2.03 | 0.294 | 1 |
| 01654 | Iron | 7439-89-6 | 17,500 | | 40.5 | 3.67 | 1 |
| 06955 | Lead | 7439-92-1 | 23.4 | | 3.04 | 0.507 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.6 | | 4.1 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,830 | | 10.1 | 1.69 | 1 |
| 06958 | Manganese | 7439-96-5 | 389 | | 1.01 | 0.0841 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.396 | J | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.6 | | 2.03 | 0.132 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 398 | | 10.1 | 2.93 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,590 | | 101 | 8.45 | 1 |
| 01667 | Sodium | 7440-23-5 | 71.2 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.50 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,000 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.6 | | 1.01 | 0.132 | 1 |
| 06972 | Zinc | 7440-66-6 | 146 | | 4.05 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.10 | J | 5.07 | 0.851 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.157 | J | 0.405 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.133 | J | 0.203 | 0.0263 | 2 |
| 06144 | Strontium | 7440-24-6 | 20.5 | | 0.405 | 0.0689 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.268 | | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0459 | | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.09 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473411**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:02 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68605 SDG#: PH192-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.3 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-686-SA6-TR-0.5 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7473411**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:02 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68605 SDG#: PH192-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.424 | J | 0.982 | 0.0515 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.34 | J | 4.91 | 0.0756 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 7.00 | | 4.91 | 0.0534 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 15.2 | | 4.91 | 0.0554 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 14.7 | | 4.91 | 0.0486 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 409 | B | 4.91 | 0.154 | 1 |
| 11031 | OCDD | 3268-87-9 | 8,840 | EB | 9.82 | 0.132 | 1 |
| 11650 | 2378-TCDF-Conf | 51207-31-9 | 1.49 | C | 0.982 | 0.0816 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.77 | J | 4.91 | 0.0376 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.44 | JB | 4.91 | 0.0359 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.56 | JB | 4.91 | 0.0571 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.938 | J | 4.91 | 0.0525 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.698 | JB | 4.91 | 0.0521 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.25 | J | 4.91 | 0.0536 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 23.9 | B | 4.91 | 0.0354 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.28 | JB | 4.91 | 0.0471 | 1 |
| 11031 | OCDF | 39001-02-0 | 83.2 | B | 9.82 | 0.0325 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 16.6 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDF-Conf | 70 | 24 - 169 |
| 13C12-2378-TCDD | 85 | 25 - 164 |
| 13C12-12378-PeCDD | 94 | 25 - 181 |
| 13C12-123478-HxCDD | 87 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 93 | 28 - 130 |
| 13C12-1234678-HpCDD | 93 | 23 - 140 |
| 13C12-OCDD | 90 | 17 - 157 |
| 13C12-12378-PeCDF | 101 | 24 - 185 |
| 13C12-23478-PeCDF | 99 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 95 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 79 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473411**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:02 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68605 SDG#: PH192-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473411**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:02 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68605 SDG#: PH192-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14148SLC026 | 05/30/2014 05:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14148SLC026 | 05/29/2014 09:30 | David S Schrum | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 01:42 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 19:27 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 04:39 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149003 | 06/02/2014 23:39 | Joseph D Anderson | 1 |
| 11650 | Dioxins/Furans in Solids-Conf | EPA 1613B October 1994 | 1 | 14149003 | 06/04/2014 03:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149003 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-0.5 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473411**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:02 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68605 SDG#: PH192-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:36 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:35 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:35 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:35 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:35 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:30 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473412**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:20 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68650 SDG#: PH192-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.41 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473412**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:20 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68650 SDG#: PH192-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 23,000 | | 42.2 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.22 | U | 4.22 | 0.781 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.64 | | 4.22 | 0.739 | 1 |
| 06946 | Barium | 7440-39-3 | 104 | | 1.06 | 0.0348 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.911 | J | 1.06 | 0.0707 | 1 |
| 07914 | Boron | 7440-42-8 | 4.95 | J | 10.6 | 0.887 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.561 | J | 1.06 | 0.0803 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,400 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.0 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.69 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 8.37 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 25,000 | | 42.2 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 6.76 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 27.4 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,050 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 317 | | 1.06 | 0.0876 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.413 | J | 2.11 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.3 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 220 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,030 | | 106 | 8.81 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.68 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,270 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 48.7 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 50.7 | | 4.22 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.35 | J | 5.28 | 0.887 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.135 | J | 0.422 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0617 | J | 0.211 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.1 | | 0.422 | 0.0718 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.302 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0174 | U | 0.0174 | 0.0104 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473412**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:20 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68650 SDG#: PH192-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 6.18 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.3 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.3 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473412**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:20 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68650 SDG#: PH192-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0436 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.116 | J | 5.09 | 0.0359 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0604 | JQ | 5.09 | 0.0271 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0889 | JQ | 5.09 | 0.0293 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.129 | J | 5.09 | 0.0268 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.42 | JBQ | 5.09 | 0.0415 | 1 |
| 11031 | OCDD | 3268-87-9 | 41.2 | B | 10.2 | 0.0402 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 | U | 1.02 | 0.0342 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.119 | JQ | 5.09 | 0.0196 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.103 | JB | 5.09 | 0.0186 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0947 | JB | 5.09 | 0.0252 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0737 | JQ | 5.09 | 0.0229 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0776 | JBQ | 5.09 | 0.0241 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0398 | JQ | 5.09 | 0.0242 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.273 | JBQ | 5.09 | 0.0243 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0420 | JBQ | 5.09 | 0.0356 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.586 | JBQ | 10.2 | 0.0376 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.181 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 67 | 32 - 141 |
| 13C12-123678-HxCDD | 65 | 28 - 130 |
| 13C12-123789-HxCDD | 70 | 28 - 130 |
| 13C12-1234678-HpCDD | 68 | 23 - 140 |
| 13C12-OCDD | 61 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 81 | 21 - 178 |
| 13C12-123478-HxCDF | 62 | 26 - 152 |
| 13C12-123678-HxCDF | 69 | 26 - 123 |
| 13C12-234678-HxCDF | 63 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 77 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 52 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473412**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:20 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68650 SDG#: PH192-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473412**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:20 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68650 SDG#: PH192-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/27/2014 12:36 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 06:37 | Marie D Beamenderfer | 24.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234583 | 05/22/2014 15:21 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234583 | 05/22/2014 15:21 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 02:00 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 02:34 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 00:43 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149003 | 06/03/2014 00:35 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149003 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-5.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473412**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:20 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68650 SDG#: PH192-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:40 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:38 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:38 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:38 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:38 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:32 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-11.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473413**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:58 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68611 SDG#: PH192-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 23.67 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-686-SA6-TR-11.0 Grab Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7473413**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:58 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68611 SDG#: PH192-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,400 | | 41.1 | 7.40 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.760 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.76 | J | 4.11 | 0.719 | 1 |
| 06946 | Barium | 7440-39-3 | 62.5 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.585 | J | 1.03 | 0.0688 | 1 |
| 07914 | Boron | 7440-42-8 | 4.31 | J | 10.3 | 0.862 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.433 | J | 1.03 | 0.0780 | 1 |
| 01650 | Calcium | 7440-70-2 | 1,860 | | 20.5 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.4 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.32 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 6.08 | | 2.05 | 0.298 | 1 |
| 01654 | Iron | 7439-89-6 | 20,700 | | 41.1 | 3.72 | 1 |
| 06955 | Lead | 7439-92-1 | 5.05 | | 3.08 | 0.513 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.1 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,170 | | 10.3 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 167 | | 1.03 | 0.0852 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.05 | U | 2.05 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.62 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 137 | | 10.3 | 2.97 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,630 | | 103 | 8.56 | 1 |
| 01667 | Sodium | 7440-23-5 | 125 | | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.71 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,130 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.2 | | 1.03 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 39.6 | | 4.11 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.33 | J | 5.13 | 0.862 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.411 | U | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0462 | J | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.8 | | 0.411 | 0.0698 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.258 | | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0166 | U | 0.0166 | 0.0099 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-11.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473413**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:58 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68611 SDG#: PH192-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 6.96 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.5 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.5 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-11.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473413**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:58 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68611 SDG#: PH192-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0317 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.14 | U | 5.14 | 0.0258 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0507 | JQ | 5.14 | 0.0242 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0622 | JQ | 5.14 | 0.0261 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0530 | JQ | 5.14 | 0.0241 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.08 | JB | 5.14 | 0.0318 | 1 |
| 11031 | OCDD | 3268-87-9 | 21.1 | B | 10.3 | 0.0221 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0227 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0356 | JQ | 5.14 | 0.0112 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0190 | JBQ | 5.14 | 0.0113 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0578 | JBQ | 5.14 | 0.0163 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0371 | JQ | 5.14 | 0.0146 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0541 | JB | 5.14 | 0.0175 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0215 | JQ | 5.14 | 0.0147 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.129 | JBQ | 5.14 | 0.0177 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0387 | JBQ | 5.14 | 0.0260 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.364 | JB | 10.3 | 0.0247 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0227 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 78 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 76 | 24 - 169 |
| 13C12-12378-PeCDF | 90 | 24 - 185 |
| 13C12-23478-PeCDF | 86 | 21 - 178 |
| 13C12-123478-HxCDF | 71 | 26 - 152 |
| 13C12-123678-HxCDF | 80 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-11.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473413**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:58 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68611 SDG#: PH192-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-11.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473413**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:58 by BC

Submitted: 05/22/2014 09:25
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68611 SDG#: PH192-04*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14142SLF026 | 05/28/2014 05:50 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14142SLF026 | 05/23/2014 09:45 | Katheryne V Sponheimer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 07:15 | Marie D Beamenderfer | 23.67 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234583 | 05/22/2014 15:23 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234583 | 05/22/2014 15:23 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 02:18 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 02:56 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 01:05 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149003 | 06/03/2014 01:32 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149003 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-686-SA6-TR-11.0 Grab Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7473413**
**LL Group # 1476374**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:58 by BC

Submitted: 05/22/2014 09:25
Reported: 06/05/2014 10:43

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

68611 SDG#: PH192-04*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:44 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:40 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:40 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:40 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:40 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:34 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLF026 | Sample number(s): 7473412-7473413 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 110 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 84 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 106 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 95 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 88 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 114 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 112 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 80-119 | | |
| Batch number: 14148SLC026 | Sample number(s): 7473411 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 109 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 89 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 110 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 102 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 92 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 114 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 116 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 80-119 | | |
| Batch number: 14147B16A | Sample number(s): 7473412-7473413 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 88 | | 67-120 | | |
| Batch number: 14149A94A | Sample number(s): 7473410 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 96 | 95 | 80-133 | 1 | 30 |
| Batch number: 141440034A | Sample number(s): 7473411-7473413 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 91 | 92 | 36-106 | 1 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 100 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 107 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141440032A | Sample number(s): 7473411-7473413 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 84 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 77 | | 60-115 | | |
| Batch number: 141440033A | Sample number(s): 7473411-7473413 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 101 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 104 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 104 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 91 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 77 | | 60-115 | | |
| Batch number: 141470637002 | Sample number(s): 7473411-7473413 | | | | | | | | | |
| Aluminum | 9.28 | J | 40.0 | 7.21 | mg/kg | 110 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 0.858 | J | 10.0 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 12.8 | J | 20.0 | 3.34 | mg/kg | 106 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 107 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.36 | J | 10.0 | 0.220 | mg/kg | 104 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Zinc | 0.956 | J | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141470637002A | Sample number(s): 7473411-7473413 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 113 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 115 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 108 | | 80-120 | | |
| Batch number: 141470637002B | Sample number(s): 7473411-7473413 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141480638001 | Sample number(s): 7473411-7473413 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 86 | | 85-120 | | |
| Batch number: 14142039402A | Sample number(s): 7473411-7473413 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14147162401B | Sample number(s): 7473411-7473413 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14149003 | Sample number(s): 7473411-7473413 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0672 | ng/kg | 90 | | 67-158 | | |
| 12378-PeCDD | 5.00 | U | 5.00 | 0.0446 | ng/kg | 93 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0247 | ng/kg | 95 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0260 | ng/kg | 92 | | 76-134 | | |
| 123789-HxCDD | 5.00 | U | 5.00 | 0.0242 | ng/kg | 91 | | 64-162 | | |
| 1234678-HpCDD | 0.141 | J | 5.00 | 0.0319 | ng/kg | 89 | | 70-140 | | |
| OCDD | 0.666 | J | 10.0 | 0.0325 | ng/kg | 92 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0431 | ng/kg | 98 | | 75-158 | | |
| 2378-TCDF-Conf | 1.00 | U | 1.00 | 0.0911 | ng/kg | 98 | | 75-158 | | |
| 12378-PeCDF | 5.00 | U | 5.00 | 0.0263 | ng/kg | 95 | | 80-134 | | |
| 23478-PeCDF | 0.0348 | J | 5.00 | 0.0249 | ng/kg | 95 | | 68-160 | | |
| 123478-HxCDF | 0.0521 | J | 5.00 | 0.0238 | ng/kg | 94 | | 72-134 | | |
| 123678-HxCDF | 5.00 | U | 5.00 | 0.0221 | ng/kg | 93 | | 84-130 | | |
| 123789-HxCDF | 0.0589 | J | 5.00 | 0.0226 | ng/kg | 93 | | 78-130 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 234678-HxCDF | 5.00 U | 5.00 | 0.0229 | ng/kg | 96 | | 70-156 | | |
| 1234678-HpCDF | 0.0566 J | 5.00 | 0.0106 | ng/kg | 92 | | 82-122 | | |
| 1234789-HpCDF | 0.0442 J | 5.00 | 0.0170 | ng/kg | 92 | | 78-138 | | |
| OCDF | 0.153 J | 10.0 | 0.0609 | ng/kg | 93 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.000766 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14142SLF026 | Sample number(s): 7473412-7473413 UNSPK: P471505 | | | | | | | | |
| Acenaphthene | 101 | 99 | 48-127 | 1 | 30 | | | | |
| Acenaphthylene | 99 | 102 | 60-128 | 3 | 30 | | | | |
| Anthracene | 99 | 103 | 52-126 | 5 | 30 | | | | |
| Benzo(a)anthracene | 107 | 112 | 44-143 | 5 | 30 | | | | |
| Benzo(a)pyrene | 95 | 96 | 49-137 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 106 | 102 | 26-142 | 4 | 30 | | | | |
| Benzo(e)pyrene | 85 | 86 | 63-111 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 89 | 92 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 92 | 94 | 49-144 | 3 | 30 | | | | |
| Butylbenzylphthalate | 110 | 112 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 114 | 109 | 52-147 | 4 | 30 | | | | |
| Chrysene | 92 | 96 | 43-141 | 4 | 30 | | | | |
| Dibenz(a,h)anthracene | 93 | 96 | 25-145 | 4 | 30 | | | | |
| Diethylphthalate | 80 | 83 | 66-140 | 5 | 30 | | | | |
| Dimethylphthalate | 87 | 89 | 70-123 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 123 | 121 | 48-164 | 1 | 30 | | | | |
| Fluoranthene | 94 | 106 | 38-153 | 11 | 30 | | | | |
| Fluorene | 98 | 100 | 57-130 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 98 | 95 | 26-139 | 3 | 30 | | | | |
| 1-Methylnaphthalene | 92 | 92 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 97 | 46-147 | 3 | 30 | | | | |
| Naphthalene | 93 | 97 | 52-136 | 5 | 30 | | | | |
| N-Nitrosodimethylamine | 89 | 87 | 39-134 | 1 | 30 | | | | |
| Di-n-octylphthalate | 121 | 119 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 93 | 101 | 50-137 | 8 | 30 | | | | |
| Pyrene | 83 | 96 | 26-143 | 14 | 30 | | | | |
| Batch number: 14148SLC026 | Sample number(s): 7473411 UNSPK: 7473411 | | | | | | | | |
| Acenaphthene | 523* | 93 | 48-127 | 139* | 30 | | | | |
| Acenaphthylene | 100 | 93 | 60-128 | 8 | 30 | | | | |
| Anthracene | 828* | 94 | 52-126 | 157* | 30 | | | | |
| Benzo(a)anthracene | 2123* | 107 | 44-143 | 179* | 30 | | | | |
| Benzo(a)pyrene | 1356* | 88 | 49-137 | 173* | 30 | | | | |
| Benzo(b)fluoranthene | 1617* | 108 | 26-142 | 168* | 30 | | | | |
| Benzo(e)pyrene | 731* | 80 | 63-111 | 154* | 30 | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | 521* | 55 | 33-141 | 156* | 30 | | | | |
| Benzo(k)fluoranthene | 838* | 84 | 49-144 | 160* | 30 | | | | |
| Butylbenzylphthalate | 107 | 124 | 64-156 | 14 | 30 | | | | |
| Di-n-butylphthalate | 100 | 129 | 52-147 | 21 | 30 | | | | |
| Chrysene | 2194* | 89 | 43-141 | 178* | 30 | | | | |
| Dibenz(a,h)anthracene | 274* | 68 | 25-145 | 119* | 30 | | | | |
| Diethylphthalate | 89 | 93 | 66-140 | 5 | 30 | | | | |
| Dimethylphthalate | 86 | 85 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 74 | 89 | 48-164 | 9 | 30 | | | | |
| Fluoranthene | 5514* | 114 | 38-153 | 189* | 30 | | | | |
| Fluorene | 371* | 83 | 57-130 | 126* | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 613* | 65 | 26-139 | 158* | 30 | | | | |
| 1-Methylnaphthalene | 126 | 85 | 59-139 | 38* | 30 | | | | |
| 2-Methylnaphthalene | 150* | 89 | 46-147 | 49* | 30 | | | | |
| Naphthalene | 134 | 87 | 52-136 | 41* | 30 | | | | |
| N-Nitrosodimethylamine | 87 | 86 | 39-134 | 2 | 30 | | | | |
| Di-n-octylphthalate | 102 | 134 | 52-162 | 27 | 30 | | | | |
| Phenanthrene | 5273* | 107 | 50-137 | 191* | 30 | | | | |
| Pyrene | 4103* | 96 | 26-143 | 188* | 30 | | | | |
| Batch number: 14147B16A | Sample number(s): 7473412-7473413 UNSPK: P471505 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 76 | 79 | 69-123 | 1 | 30 | | | | |
| Batch number: 141440034A | Sample number(s): 7473411-7473413 UNSPK: P473686 | | | | | | | | |
| PCB-1016 | 73 | 85 | 41-135 | 15 | 50 | | | | |
| PCB-1260 | 89 | 87 | 40-134 | 3 | 50 | | | | |
| Batch number: 141440032A | Sample number(s): 7473411-7473413 UNSPK: P473686 | | | | | | | | |
| EFH (C12-C14) | 101 | 97 | 49-123 | 4 | 20 | | | | |
| EFH (C15-C20) | 140* | 120 | 49-123 | 16 | 20 | | | | |
| EFH (C21-C30) | 353* | 130* | 49-123 | 75* | 20 | | | | |
| EFH (C30-C40) | 484* | 156* | 49-123 | 76* | 20 | | | | |
| EFH (C8-C11) | 97 | 90 | 49-123 | 7 | 20 | | | | |
| Batch number: 141440033A | Sample number(s): 7473411-7473413 UNSPK: P473686 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 81 | 70 | 49-123 | 14 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 90 | 75 | 49-123 | 18 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 196* | 74 | 49-123 | 79* | 20 | | | | |
| EFH C30-C40 w/ SiGel | 216* | 72 | 49-123 | 80* | 20 | | | | |
| EFH C8-C11 w/ SiGel | 67 | 55 | 49-123 | 18 | 20 | | | | |
| Batch number: 141470637002 | Sample number(s): 7473411-7473413 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Aluminum | 372 (2) | 821 (2) | 75-125 | 6 | 20 | 15,100 | 13,200 | 13 | 20 |
| Antimony | 52* | 51* | 75-125 | 2 | 20 | 4.00 U | 4.00 U | 0 (1) | 20 |
| Arsenic | 96 | 96 | 75-125 | 2 | 20 | 4.11 | 3.09 J | 28* (1) | 20 |
| Barium | 35* | 37* | 75-125 | 2 | 20 | 230 | 94.1 | 84* | 20 |
| Beryllium | 101 | 102 | 75-125 | 3 | 20 | 0.562 J | 0.486 J | 15 (1) | 20 |
| Boron | 98 | 98 | 75-125 | 3 | 20 | 6.78 J | 4.93 J | 32* (1) | 20 |
| Cadmium | 97 | 97 | 75-125 | 3 | 20 | 0.549 J | 0.491 J | 11 (1) | 20 |
| Calcium | 149 (2) | 103 (2) | 75-125 | 5 | 20 | 2,920 | 2,520 | 15 | 20 |
| Chromium | 81 | 89 | 75-125 | 5 | 20 | 20.4 | 16.4 | 22* | 20 |
| Cobalt | 96 | 97 | 75-125 | 4 | 20 | 5.22 | 5.04 | 4 | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 102 | 105 | 75-125 | 4 | 20 | 10.3 | 8.93 | 14 (1) | 20 |
| Iron | -2173 (2) | -1295 (2) | 75-125 | 5 | 20 | 18,600 | 17,400 | 7 | 20 |
| Lead | 98 | 93 | 75-125 | 2 | 20 | 6.89 | 5.48 | 23* (1) | 20 |
| Lithium | 99 | 101 | 75-125 | 4 | 20 | 21.7 | 20.3 | 7 | 20 |
| Magnesium | -196 (2) | -75 (2) | 75-125 | 6 | 20 | 4,220 | 3,840 | 9 | 20 |
| Manganese | 156 (2) | 119 (2) | 75-125 | 5 | 20 | 291 | 294 | 1 | 20 |
| Molybdenum | 95 | 96 | 75-125 | 3 | 20 | 0.441 J | 0.329 J | 29* (1) | 20 |
| Nickel | 96 | 97 | 75-125 | 4 | 20 | 11.0 | 10.8 | 3 | 20 |
| Phosphorus | 106 | 38* | 75-125 | 15 | 20 | 372 | 354 | 5 | 20 |
| Potassium | 108 | 109 | 75-125 | 1 | 20 | 3,220 | 3,070 | 5 | 20 |
| Sodium | 95 | 96 | 75-125 | 4 | 20 | 111 | 102 | 8 (1) | 20 |
| Tin | 90 | 90 | 75-125 | 3 | 20 | 2.39 J | 2.23 J | 7 (1) | 20 |
| Titanium | 150 (2) | 258 (2) | 75-125 | 9 | 20 | 1,070 | 994 | 8 | 20 |
| Vanadium | 97 | 102 | 75-125 | 5 | 20 | 34.9 | 30.6 | 13 | 20 |
| Zinc | 93 | 89 | 75-125 | 1 | 20 | 56.3 | 52.0 | 8 | 20 |
| Zirconium | 98 | 98 | 75-125 | 4 | 20 | 3.99 J | 4.08 J | 2 (1) | 20 |
| Batch number: 141470637002A | Sample number(s): 7473411-7473413 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Silver | 105 | 102 | 75-125 | 0 | 20 | 0.0276 J | 0.0297 J | 8 (1) | 20 |
| Strontium | 106 | 92 | 75-125 | 3 | 20 | 22.8 | 19.7 | 15 | 20 |
| Thallium | 120 | 112 | 75-125 | 2 | 20 | 0.256 | 0.252 | 1 (1) | 20 |
| Batch number: 141470637002B | Sample number(s): 7473411-7473413 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Selenium | 99 | 99 | 75-125 | 3 | 20 | 0.137 J | 0.118 J | 15 (1) | 20 |
| Batch number: 141480638001 | Sample number(s): 7473411-7473413 UNSPK: P473686 BKG: P473686 | | | | | | | | |
| 3a Mercury 7471A | 96 | 118 | 65-135 | 14 | 20 | 0.0559 | 0.0505 | 10 (1) | 20 |
| Batch number: 14142039402A | Sample number(s): 7473411-7473413 BKG: P473686 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.24 | 7.22 | 0 | 3 |
| Batch number: 14147162401B | Sample number(s): 7473411-7473413 BKG: P473396 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 12.9 | 13.8 | 6 | 20 |
| Batch number: 14149003 | Sample number(s): 7473411-7473413 UNSPK: P473148 | | | | | | | | |
| 2378-TCDD | 85 | 87 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDD | 90 | 90 | 40-135 | 4 | 20 | | | | |
| 123478-HxCDD | 92 | 92 | 40-135 | 4 | 20 | | | | |
| 123678-HxCDD | 89 | 88 | 40-135 | 4 | 20 | | | | |
| 123789-HxCDD | 90 | 87 | 40-135 | 6 | 20 | | | | |
| 1234678-HpCDD | 128 | 99 | 40-135 | 9 | 20 | | | | |
| OCDD | 484 (2) | 326 (2) | 40-135 | 7 | 20 | | | | |
| 2378-TCDF | 90 | 88 | 40-135 | 6 | 20 | | | | |
| 2378-TCDF-Conf | 90 | 88 | 40-135 | 6 | 20 | | | | |
| 12378-PeCDF | 89 | 91 | 40-135 | 1 | 20 | | | | |
| 23478-PeCDF | 89 | 91 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDF | 91 | 90 | 40-135 | 6 | 20 | | | | |
| 123678-HxCDF | 90 | 88 | 40-135 | 6 | 20 | | | | |
| 123789-HxCDF | 88 | 90 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 89 | 90 | 40-135 | 3 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1234678-HpCDF | 92 | 90 | 40-135 | 5 | 20 | | | | |
| 1234789-HpCDF | 87 | 88 | 40-135 | 4 | 20 | | | | |
| OCDF | 90 | 91 | 40-135 | 2 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14142SLF026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7473412 | 87 | 101 | 80 |
| 7473413 | 86 | 95 | 76 |
| Blank | 92 | 106 | 85 |
| LCS | 96 | 110 | 88 |
| MS | 90 | 100 | 83 |
| MSD | 89 | 99 | 82 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14148SLC026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7473411 | 98 | 92 | 83 |
| Blank | 106 | 114 | 91 |
| LCS | 108 | 119* | 92 |
| MS | 105 | 81 | 80 |
| MSD | 93 | 94 | 78 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14147B16A

| | Trifluorotoluene-F |
|---|---|
| 7473412 | 86 |
| 7473413 | 75 |
| Blank | 98 |
| LCS | 101 |
| MS | 90 |
| MSD | 83 |
| Limits: | 50-142 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

## Surrogate Quality Control

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14149A94A

| | Trifluorotoluene-F |
|---|---|
| 7473410 | 81 |
| Blank | 82 |
| LCS | 91 |
| LCSD | 90 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141440034A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7473411 | 97 | 103 |
| 7473412 | 99 | 100 |
| 7473413 | 103 | 116 |
| Blank | 112 | 122* |
| LCS | 110 | 120 |
| LCSD | 104 | 116 |
| MS | 84 | 94 |
| MSD | 96 | 98 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141440032A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7473411 | 72 | 94 |
| 7473412 | 83 | 90 |
| 7473413 | 75 | 90 |
| Blank | 82 | 96 |
| LCS | 87 | 95 |
| MS | 82 | 101 |
| MSD | 80 | 98 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141440033A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7473411 | 75 | 91 |
| 7473412 | 72 | 81 |
| 7473413 | 70 | 78 |
| Blank | 79 | 87 |
| LCS | 92 | 107 |
| MS | 73 | 80 |
| MSD | 63 | 76 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476374
Reported: 06/05/14 at 10:43 AM

## Surrogate Quality Control

Batch number: 14149003

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7473411 | 85 | 94 | 87 | 87 | 93 | 93 |
| 7473412 | 74 | 78 | 67 | 65 | 70 | 68 |
| 7473413 | 73 | 83 | 79 | 78 | 81 | 82 |
| Blank | 67 | 75 | 84 | 82 | 82 | 79 |
| MS | 80 | 79 | 84 | 82 | 83 | 77 |
| MSD | 80 | 78 | 80 | 78 | 81 | 76 |
| OPR | 69 | 73 | 79 | 78 | 80 | 75 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7473411 | 90 | | 101 | 99 | 83 | 89 |
| 7473412 | 61 | 74 | 84 | 81 | 62 | 69 |
| 7473413 | 77 | 76 | 90 | 86 | 71 | 80 |
| Blank | 65 | 59 | 69 | 64 | 68 | 75 |
| MS | 64 | 72 | 69 | 69 | 70 | 70 |
| MSD | 60 | 71 | 68 | 67 | 67 | 67 |
| OPR | 64 | 60 | 69 | 63 | 66 | 73 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-2378-TCDF-Conf |
|---|---|---|---|---|---|---|
| 7473411 | 85 | 95 | 98 | 82 | 79 | 70 |
| 7473412 | 63 | 72 | 77 | 59 | 52 | |
| 7473413 | 76 | 75 | 94 | 68 | 61 | |
| Blank | 71 | 78 | 88 | 59 | 49 | 64 |
| MS | 73 | 68 | 67 | 57 | 41 | 72 |
| MSD | 69 | 67 | 65 | 62 | 46 | 71 |
| OPR | 68 | 73 | 83 | 56 | 47 | 60 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | 24-169 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/21/2014
CarrierName: FedEx
AirbillNo: 770058142099

A-13013
G-1476374
S-7473410-13

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140521-03
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB3-052114 | 5/21/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-686-SA6-TR-0.5 | 5/21/14 08:02 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | For all EFH, silica gel clean up |
| SL-686-SA6-TR-5.0 | 5/21/14 08:20 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | required on half the extracts. |
| SL-686-SA6-TR-5.0 | 5/21/14 08:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | Analyze both extracts for EFH. |
| SL-686-SA6-TR-11.0 | 5/21/14 10:58 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-686-SA6-TR-11.0 | 5/21/14 10:58 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Ben Cisneros

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/21/2014 | 16:00 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/22/14 | 0925 |

TRENCHING

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15293

Group Number(s): 476374

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/22/2014 9:25 |
| Number of Packages: | 4 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | No | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:54 on 05/22/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 0.8 | DT | Wet | Y | Bagged | N | N |
| 3 | DT131 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 4 | DT131 | 1.0 | DT | Wet | Y | Bagged | N | N |

## Sample Date/Time Discrepancy Details

| Sample ID on COC | Date/Time on Label | Comments |
|---|---|---|
| FDG2-SL-584SA5D-SB-4.0-5.0 | 5/21/2014 08:18 | 1 16 oz. container |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 06, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/22/2014
Group Number: 1476433
SDG: PH193
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB1-052114 Water | 7473685 |
| FDG2-SL-585-SA5D-SB-0.0-0.5 Soil | 7473686 |
| FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil | 7473687 |
| FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil | 7473688 |
| FDG2-SL-585-SA5D-SB-0.0-0.5DUP Soil | 7473689 |
| FDG2-SL-885-SA5D-SB-0.0-0.5 Soil | 7473690 |
| FDG2-SL-585-SA5D-SB-4.0-5.0 Soil | 7473691 |
| FDG2-SL-584-SA5D-SB-0.0-0.5 Soil | 7473692 |
| FDG2-SL-584-SA5D-SB-4.0-5.0 Soil | 7473693 |
| FDG2-SL-586-SA5D-SB-0.0-0.5 Soil | 7473694 |
| FDG2-SL-586-SA5D-SB-2.0-3.0 Soil | 7473695 |
| FDG2-SL-623-SA8-SB-0.0-0.5 Soil | 7473696 |
| FDG2-SL-623-SA8-SB-4.0-5.0 Soil | 7473697 |
| FDG2-SL-623-SA8-SB-9.0-10.0 Soil | 7473698 |
| FDG2-SL-623-SA8-SB-14.0-15.0 Soil | 7473699 |
| FDG2-SL-623-SA8-SB-19.0-20.0 Soil | 7473700 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB1-052114 Water**
**SSFL Phase 3 Subarea 5D/8**

**LL Sample # WW 7473685**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:00

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

1TB-- SDG#: PH193-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/29/2014 23:20 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/29/2014 23:20 | Miranda P Tillinghast | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473686**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.35 | J | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | J | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 5.7 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 7.5 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 18 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 13 | J | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 11 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 4.8 | | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 7.1 | J | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 14 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 2.1 | | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 34 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 11 | | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 13 | | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.6 | J | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.5 | | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.0 | | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 8.4 | | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 8.7 | | 1.8 | 0.70 | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13031 | Formaldehyde | 50-00-0 | 21,000 | U | 21,000 | 13,000 | 1 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 2.4 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 7.8 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.85 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.42 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.49 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.23 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473686**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 26 | J | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 28 | | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.3 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 18 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.7 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 5.7 | J | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,300 | | 42.3 | 7.62 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.23 | U | 4.23 | 0.782 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.33 | | 4.23 | 0.740 | 1 |
| 06946 | Barium | 7440-39-3 | 93.9 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.593 | J | 1.06 | 0.0708 | 1 |
| 07914 | Boron | 7440-42-8 | 5.14 | J | 10.6 | 0.888 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.590 | J | 1.06 | 0.0803 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,210 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 23.5 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.16 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 16.1 | | 2.11 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 20,100 | | 42.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 12.0 | | 3.17 | 0.529 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.1 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,300 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 218 | | 1.06 | 0.0877 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473686**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06960 | Molybdenum | 7439-98-7 | 0.424 | J | 2.11 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.0 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 350 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,600 | | 106 | 8.82 | 1 |
| 01667 | Sodium | 7440-23-5 | 91.2 | J | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.25 | J | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.1 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 88.2 | | 4.23 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.44 | J | 5.29 | 0.888 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.183 | J | 0.423 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.372 | | 0.211 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.4 | | 0.423 | 0.0719 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.300 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0591 | | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.24 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473686**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.06 | U | 1.06 | 0.0458 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.990 | J | 5.28 | 0.0695 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.51 | JB | 5.28 | 0.0487 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 6.21 | | 5.28 | 0.0513 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 3.64 | J | 5.28 | 0.0492 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 144 | B | 5.28 | 0.121 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,670 | B | 10.6 | 0.0784 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.835 | J | 1.06 | 0.102 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.73 | JB | 5.28 | 0.0388 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.02 | JB | 5.28 | 0.0381 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.950 | J | 5.28 | 0.0492 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.955 | JB | 5.28 | 0.0482 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.762 | JB | 5.28 | 0.0557 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.24 | JB | 5.28 | 0.0486 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 17.1 | B | 5.28 | 0.0281 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 1.95 | JB | 5.28 | 0.0363 | 1 |
| 11031 | OCDF | 39001-02-0 | 50.0 | B | 10.6 | 0.0291 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 5.10 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 88 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 80 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 90 | 24 - 169 |
| 13C12-12378-PeCDF | 96 | 24 - 185 |
| 13C12-23478-PeCDF | 94 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 84 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 69 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473686**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473686**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 12:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 19:36 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 20:20 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 02:36 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 18:22 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 05:01 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/03/2014 07:25 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473686**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:03 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 20:52 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:52 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:52 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:52 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:36 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473687**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 37 | | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 34 | | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 39 | | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 48 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 43 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 62 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 50 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 37 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 42 | | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 39 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 40 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 50 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 26 | | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 35 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 32 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 52 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 52 | | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 29 | | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 46 | | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 33 | | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 36 | | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 35 | | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 31 | | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 48 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 49 | | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 41 | | 1.8 | 0.70 | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | ug/kg | | ug/kg | ug/kg | |
| 13031 | Formaldehyde | 50-00-0 | 100,000 | | 21,000 | 13,000 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 3.0 | | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.0 | | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.3 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.1 | | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.6 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 9.6 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 13 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.6 | | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.8 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.3 | | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 7.0 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.8 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.9 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.6 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 6.2 | | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.1 | | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.9 | | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 41 | | 7.0 | 1.8 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473687**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 13 | J | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 130 | | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 70 | | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 150 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 11 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 54 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 95 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.3 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 7.1 | | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 29 | | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 40 | | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.5 | J | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 22,100 | | 41.9 | 7.55 | 1 |
| 06944 | Antimony | 7440-36-0 | 22.5 | | 4.19 | 0.774 | 1 |
| 06935 | Arsenic | 7440-38-2 | 24.8 | | 4.19 | 0.733 | 1 |
| 06946 | Barium | 7440-39-3 | 321 | | 1.05 | 0.0345 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.05 | | 1.05 | 0.0701 | 1 |
| 07914 | Boron | 7440-42-8 | 212 | | 10.5 | 0.879 | 1 |
| 06949 | Cadmium | 7440-43-9 | 6.61 | | 1.05 | 0.0795 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,010 | | 20.9 | 3.50 | 1 |
| 06951 | Chromium | 7440-47-3 | 48.6 | | 3.14 | 0.167 | 1 |
| 06952 | Cobalt | 7440-48-4 | 61.8 | | 1.05 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 47.5 | | 2.09 | 0.304 | 1 |
| 01654 | Iron | 7439-89-6 | 23,300 | | 41.9 | 3.79 | 1 |
| 06955 | Lead | 7439-92-1 | 31.4 | | 3.14 | 0.523 | 1 |
| 01656 | Lithium | 7439-93-2 | 131 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,070 | | 10.5 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 364 | | 1.05 | 0.0869 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 214 | | 2.09 | 0.178 | 1 |
| 06961 | Nickel | 7440-02-0 | 73.2 | | 2.09 | 0.136 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473687**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10145 | Phosphorus | 7723-14-0 | 515 | 10.5 | 3.02 | 1 |
| 01662 | Potassium | 7440-09-7 | 5,450 | 105 | 8.73 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,170 | 105 | 17.5 | 1 |
| 06969 | Tin | 7440-31-5 | 405 | 10.5 | 0.230 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,470 | 1.05 | 0.178 | 1 |
| 06971 | Vanadium | 7440-62-2 | 99.0 | 1.05 | 0.136 | 1 |
| 06972 | Zinc | 7440-66-6 | 187 | 4.19 | 0.209 | 1 |
| 10146 | Zirconium | 7440-67-7 | 106 | 5.23 | 0.879 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.26 | 0.419 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 11.2 | 0.209 | 0.0272 | 2 |
| 06144 | Strontium | 7440-24-6 | 36.7 | 0.419 | 0.0712 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.775 | 0.209 | 0.0314 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.224 | 0.0173 | 0.0104 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 5.4 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473687**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 20.4 | B | 1.04 | 0.0704 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 104 | | 5.18 | 0.0998 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 101 | B | 5.18 | 0.0892 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 105 | | 5.18 | 0.0922 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 102 | | 5.18 | 0.0831 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 277 | B | 5.18 | 0.127 | 1 |
| 11031 | OCDD | 3268-87-9 | 2,010 | B | 10.4 | 0.0792 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.1 | | 1.04 | 0.155 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 102 | B | 5.18 | 0.0555 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 101 | B | 5.18 | 0.0563 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 98.6 | | 5.18 | 0.104 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 98.2 | B | 5.18 | 0.0978 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 95.6 | B | 5.18 | 0.102 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 99.8 | B | 5.18 | 0.0955 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 119 | B | 5.18 | 0.0529 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 99.1 | B | 5.18 | 0.0714 | 1 |
| 11031 | OCDF | 39001-02-0 | 249 | B | 10.4 | 0.0372 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 93 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 96 | 23 - 140 |
| 13C12-OCDD | 99 | 17 - 157 |
| 13C12-2378-TCDF | 87 | 24 - 169 |
| 13C12-12378-PeCDF | 99 | 24 - 185 |
| 13C12-23478-PeCDF | 99 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 83 | 28 - 136 |
| 13C12-123789-HxCDF | 86 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 79 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473687**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473687**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 13:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 19:44 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 20:34 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 02:55 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 18:44 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 05:22 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/03/2014 10:15 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473687**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:14 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 20:59 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:59 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:59 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:59 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:42 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473688**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 35 | | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 33 | | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 36 | | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 38 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 33 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 43 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 31 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 19 | | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 35 | | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 39 | | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 39 | | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 34 | | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 24 | | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 34 | | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 30 | | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 70 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 37 | | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 29 | | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 23 | | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 31 | | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 33 | | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 33 | | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 30 | | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 83 | | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 35 | | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 31 | | 1.8 | 0.70 | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | ug/kg | | ug/kg | ug/kg | |
| 13031 | Formaldehyde | 50-00-0 | 110,000 | | 21,000 | 13,000 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 2.6 | | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 2.5 | | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.0 | | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 2.8 | | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 7.1 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 6.8 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 7.7 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.2 | | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.4 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 2.8 | | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 5.7 | | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.0 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.2 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 5.2 | | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 5.4 | | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 2.7 | | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.0 | | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 36 | | 7.0 | 1.8 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473688**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 150 | | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 33 | | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 150 | | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 9.5 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 24 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 43 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.8 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 3.7 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.9 | | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 12 | | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 17 | | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 2.9 | J | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 28,500 | | 41.1 | 7.40 | 1 |
| 06944 | Antimony | 7440-36-0 | 14.1 | | 4.11 | 0.759 | 1 |
| 06935 | Arsenic | 7440-38-2 | 25.2 | | 4.11 | 0.718 | 1 |
| 06946 | Barium | 7440-39-3 | 357 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.22 | | 1.03 | 0.0688 | 1 |
| 07914 | Boron | 7440-42-8 | 205 | | 10.3 | 0.862 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.81 | | 1.03 | 0.0780 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,380 | | 20.5 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 53.4 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 59.4 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 45.4 | | 2.05 | 0.298 | 1 |
| 01654 | Iron | 7439-89-6 | 31,900 | | 82.1 | 7.43 | 2 |
| 06955 | Lead | 7439-92-1 | 24.3 | | 3.08 | 0.513 | 1 |
| 01656 | Lithium | 7439-93-2 | 136 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,150 | | 10.3 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 542 | | 1.03 | 0.0852 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 191 | | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 70.7 | | 2.05 | 0.133 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473688**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10145 | Phosphorus | 7723-14-0 | 509 | 10.3 | 2.97 | 1 |
| 01662 | Potassium | 7440-09-7 | 6,200 | 103 | 8.56 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,160 | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 361 | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,650 | 1.03 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 109 | 1.03 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 130 | 4.11 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 104 | 5.13 | 0.862 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.15 | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 10.6 | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 40.4 | 0.411 | 0.0698 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.791 | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.259 | 0.0169 | 0.0102 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 5.4 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473688**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 21.0 | B | 1.04 | 0.0539 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 106 | | 5.22 | 0.0529 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 104 | B | 5.22 | 0.0526 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 101 | | 5.22 | 0.0572 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 102 | | 5.22 | 0.0483 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 116 | B | 5.22 | 0.0618 | 1 |
| 11031 | OCDD | 3268-87-9 | 402 | B | 10.4 | 0.0468 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.4 | | 1.04 | 0.0723 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 103 | B | 5.22 | 0.0349 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 102 | B | 5.22 | 0.0330 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 99.8 | | 5.22 | 0.0679 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 102 | B | 5.22 | 0.0625 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 99.0 | B | 5.22 | 0.0775 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 101 | B | 5.22 | 0.0641 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 101 | B | 5.22 | 0.0480 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 97.1 | B | 5.22 | 0.0719 | 1 |
| 11031 | OCDF | 39001-02-0 | 195 | B | 10.4 | 0.0383 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 85 | 25 - 164 |
| 13C12-12378-PeCDD | 94 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 90 | 28 - 130 |
| 13C12-123789-HxCDD | 101 | 28 - 130 |
| 13C12-1234678-HpCDD | 98 | 23 - 140 |
| 13C12-OCDD | 92 | 17 - 157 |
| 13C12-2378-TCDF | 90 | 24 - 169 |
| 13C12-12378-PeCDF | 101 | 24 - 185 |
| 13C12-23478-PeCDF | 98 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 103 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 67 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473688**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473688**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 13:49 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 19:53 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 20:47 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 03:13 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 19:05 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 05:43 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/03/2014 11:12 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 22:29 | John W Yanzuk II | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473688**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:18 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:01 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:01 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:01 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:01 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:44 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-585-SA5D-SB-0.0-0.5DUP Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473689**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,300 | | 42.3 | 7.62 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.23 | U | 4.23 | 0.782 | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.51 | | 4.23 | 0.740 | 1 |
| 06946 | Barium | 7440-39-3 | 102 | | 1.06 | 0.0349 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.624 | J | 1.06 | 0.0708 | 1 |
| 07914 | Boron | 7440-42-8 | 4.48 | J | 10.6 | 0.888 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.747 | J | 1.06 | 0.0803 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,400 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 24.1 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.99 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 16.9 | | 2.11 | 0.307 | 1 |
| 01654 | Iron | 7439-89-6 | 22,900 | | 42.3 | 3.83 | 1 |
| 06955 | Lead | 7439-92-1 | 12.6 | | 3.17 | 0.529 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.9 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,750 | | 10.6 | 1.77 | 1 |
| 06958 | Manganese | 7439-96-5 | 243 | | 1.06 | 0.0877 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.382 | J | 2.11 | 0.180 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.6 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 409 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,910 | | 106 | 8.82 | 1 |
| 01667 | Sodium | 7440-23-5 | 102 | J | 106 | 17.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.56 | J | 10.6 | 0.233 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,080 | | 1.06 | 0.180 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.0 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 97.0 | | 4.23 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.30 | | 5.29 | 0.888 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.156 | J | 0.423 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.521 | | 0.211 | 0.0275 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.2 | | 0.423 | 0.0719 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.276 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0533 | | 0.0175 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.22 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 5.4 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 5.6 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-0.0-0.5DUP Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473689**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:06 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58500 SDG#: PH193-02DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:10 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 20:57 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:57 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:57 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 20:57 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:40 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-885-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473690**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:16 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88500 SDG#: PH193-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.49 | J | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 2.5 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 7.4 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 9.1 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 24 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 20 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 6.2 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 20 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 3.0 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 22 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 15 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 22 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.3 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.4 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.6 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 12 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 11 | | 1.7 | 0.70 | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13031 | Formaldehyde | 50-00-0 | 21,000 | U | 21,000 | 13,000 | 1 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.40 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.6 | J | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 6.1 | | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.2 | J | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.41 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.22 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-885-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473690**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:16 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88500 SDG#: PH193-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 22 | J | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 30 | | 18 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 13 | J | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 150 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 350 | | 52 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 26 | U | 26 | 10 | 5 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 2 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 2 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 55 | | 10 | 4.2 | 2 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 100 | | 21 | 8.4 | 2 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 2 |
| | Due to the dilution of the sample extract, capric acid recovery can not be determined. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,900 | | 41.1 | 7.41 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.760 | 1 |
| 06935 | Arsenic | 7440-38-2 | 8.49 | | 4.11 | 0.719 | 1 |
| 06946 | Barium | 7440-39-3 | 112 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.652 | J | 1.03 | 0.0689 | 1 |
| 07914 | Boron | 7440-42-8 | 5.55 | J | 10.3 | 0.863 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.969 | J | 1.03 | 0.0781 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,770 | | 20.6 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 26.8 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.64 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 26.7 | | 2.06 | 0.298 | 1 |
| 01654 | Iron | 7439-89-6 | 23,000 | | 41.1 | 3.72 | 1 |
| 06955 | Lead | 7439-92-1 | 15.0 | | 3.08 | 0.514 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.1 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,130 | | 10.3 | 1.72 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-885-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473690**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:16 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88500 SDG#: PH193-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06958 | Manganese | 7439-96-5 | 290 | | 1.03 | 0.0853 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.331 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 17.3 | | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 448 | | 10.3 | 2.97 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,090 | | 103 | 8.57 | 1 |
| 01667 | Sodium | 7440-23-5 | 96.9 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.30 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,140 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 42.1 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 111 | | 4.11 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.92 | J | 5.14 | 0.863 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.189 | J | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.714 | | 0.206 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.0 | | 0.411 | 0.0699 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.318 | | 0.206 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0627 | | 0.0167 | 0.0100 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.29 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-885-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473690**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:16 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88500 SDG#: PH193-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0875 | JBQ | 1.02 | 0.0543 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 1.11 | J | 5.10 | 0.0862 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 2.10 | JB | 5.10 | 0.0632 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 8.66 | | 5.10 | 0.0645 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 4.30 | J | 5.10 | 0.0590 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 197 | B | 5.10 | 0.143 | 1 |
| 11031 | OCDD | 3268-87-9 | 2,050 | B | 10.2 | 0.0881 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.690 | J | 1.02 | 0.130 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.81 | JB | 5.10 | 0.0525 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.15 | JB | 5.10 | 0.0502 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.95 | J | 5.10 | 0.0794 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.64 | JB | 5.10 | 0.0766 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 1.04 | JB | 5.10 | 0.0770 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 2.15 | JB | 5.10 | 0.0743 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 32.8 | B | 5.10 | 0.0414 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 3.43 | JB | 5.10 | 0.0532 | 1 |
| 11031 | OCDF | 39001-02-0 | 104 | B | 10.2 | 0.0317 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 6.74 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 94 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 89 | 17 - 157 |
| 13C12-2378-TCDF | 87 | 24 - 169 |
| 13C12-12378-PeCDF | 99 | 24 - 185 |
| 13C12-23478-PeCDF | 100 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 83 | 28 - 136 |
| 13C12-123789-HxCDF | 88 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 83 | 26 - 138 |
| 13C12-OCDF | 80 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-885-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473690**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:16 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88500 SDG#: PH193-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-885-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473690**
**LL Group # 1476433**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:16 by RR

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88500 SDG#: PH193-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 12:13 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 20:01 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 21:01 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 03:32 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 20:54 | Heather E Williams | 5 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 06:26 | Heather E Williams | 2 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/03/2014 12:09 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-885-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473690**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:16 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88500 SDG#: PH193-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:26 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:06 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:06 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:06 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:06 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:50 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473691**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:21 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58540 SDG#: PH193-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 21 | U | 21 | 6.9 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 24.7 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13031 | Formaldehyde | 50-00-0 | 2,300 | U | 2,300 | 1,400 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.1 | U | 2.1 | 1.1 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 4.5 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.93 | U | 0.93 | 0.51 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.93 | U | 0.93 | 0.25 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | Endrin | 72-20-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.9 | U | 1.9 | 0.37 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473691**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:21 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58540 SDG#: PH193-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin Ketone | 53494-70-5 | 2.0 | U | 2.0 | 0.68 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.93 | U | 0.93 | 0.19 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.5 | U | 7.5 | 1.9 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.9 | U | 1.9 | 0.39 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 37 | U | 37 | 16 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 37 | U | 37 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.7 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 5.0 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.4 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.7 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.6 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.6 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.7 | U | 5.7 | 2.3 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 23,900 | | 44.4 | 8.01 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.44 | U | 4.44 | 0.822 | 1 |
| 06935 | Arsenic | 7440-38-2 | 11.7 | | 4.44 | 0.778 | 1 |
| 06946 | Barium | 7440-39-3 | 136 | | 1.11 | 0.0367 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.15 | | 1.11 | 0.0744 | 1 |
| 07914 | Boron | 7440-42-8 | 6.03 | J | 11.1 | 0.933 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.763 | J | 1.11 | 0.0844 | 1 |
| 01650 | Calcium | 7440-70-2 | 17,000 | | 22.2 | 3.71 | 1 |
| 06951 | Chromium | 7440-47-3 | 42.3 | | 3.33 | 0.178 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.69 | | 1.11 | 0.110 | 1 |
| 06953 | Copper | 7440-50-8 | 26.0 | | 2.22 | 0.322 | 1 |
| 01654 | Iron | 7439-89-6 | 38,900 | | 88.9 | 8.04 | 2 |
| 06955 | Lead | 7439-92-1 | 9.63 | | 3.33 | 0.555 | 1 |
| 01656 | Lithium | 7439-93-2 | 48.5 | | 4.4 | 0.38 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473691**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:21 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58540 SDG#: PH193-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 8,650 | | 11.1 | 1.86 | 1 |
| 06958 | Manganese | 7439-96-5 | 310 | | 1.11 | 0.0922 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.22 | U | 2.22 | 0.189 | 1 |
| 06961 | Nickel | 7440-02-0 | 32.9 | | 2.22 | 0.144 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 672 | | 11.1 | 3.21 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,300 | | 111 | 9.26 | 1 |
| 01667 | Sodium | 7440-23-5 | 793 | | 111 | 18.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.03 | J | 11.1 | 0.244 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 1.11 | 0.189 | 1 |
| 06971 | Vanadium | 7440-62-2 | 56.1 | | 1.11 | 0.144 | 1 |
| 06972 | Zinc | 7440-66-6 | 94.1 | | 4.44 | 0.222 | 1 |
| 10146 | Zirconium | 7440-67-7 | 9.12 | | 5.55 | 0.933 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.294 | J | 0.444 | 0.111 | 2 |
| 06142 | Silver | 7440-22-4 | 0.584 | | 0.222 | 0.0289 | 2 |
| 06144 | Strontium | 7440-24-6 | 62.2 | | 0.444 | 0.0755 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.363 | | 0.222 | 0.0333 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0123 | J | 0.0187 | 0.0112 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.24 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473691**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:21 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58540 SDG#: PH193-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.13 | U | 1.13 | 0.0559 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0931 | JQ | 5.66 | 0.0491 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0647 | JBQ | 5.66 | 0.0273 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0755 | J | 5.66 | 0.0290 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0701 | JQ | 5.66 | 0.0271 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.500 | JBQ | 5.66 | 0.0340 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.25 | JB | 11.3 | 0.0382 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.13 | U | 1.13 | 0.0411 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0883 | JBQ | 5.66 | 0.0208 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0216 | JBQ | 5.66 | 0.0203 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0625 | J | 5.66 | 0.0273 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0523 | JBQ | 5.66 | 0.0231 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0526 | JB | 5.66 | 0.0300 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0478 | JBQ | 5.66 | 0.0246 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.115 | JBQ | 5.66 | 0.0143 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0440 | JBQ | 5.66 | 0.0269 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.272 | JBQ | 11.3 | 0.0424 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0203 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 95 | 25 - 181 |
| 13C12-123478-HxCDD | 87 | 32 - 141 |
| 13C12-123678-HxCDD | 90 | 28 - 130 |
| 13C12-123789-HxCDD | 92 | 28 - 130 |
| 13C12-1234678-HpCDD | 96 | 23 - 140 |
| 13C12-OCDD | 93 | 17 - 157 |
| 13C12-2378-TCDF | 85 | 24 - 169 |
| 13C12-12378-PeCDF | 102 | 24 - 185 |
| 13C12-23478-PeCDF | 95 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 83 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 111 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 57 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473691**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:21 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58540 SDG#: PH193-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473691**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:21 by RR

Submitted: 05/22/2014 09:25
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58540 SDG#: PH193-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 07:58 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 07:53 | Marie D Beamenderfer | 24.7 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234587 | 05/22/2014 19:02 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234587 | 05/22/2014 19:03 | Lisa J Cooke | n.a. |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 20:10 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 21:15 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 03:50 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 03:18 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 01:26 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/03/2014 13:05 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 22:33 | John W Yanzuk II | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-585-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473691**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 09:21 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58540 SDG#: PH193-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:30 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:09 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:09 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:09 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:09 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:52 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-584-SA5D-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473692**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 07:52 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58400 SDG#: PH193-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.6 | J | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 12 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 25 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 31 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 73 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 64 | | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 97 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 22 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 41 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 14 | | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 22 | | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 49 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 0.81 | J | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 110 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 3.7 | | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 5.8 | | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 5.7 | | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 48 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 30 | | 1.7 | 0.70 | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | ug/kg | | ug/kg | ug/kg | |
| 13031 | Formaldehyde | 50-00-0 | 2,100 | U | 2,100 | 1,300 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.21 | J | 0.85 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 19 | U | 19 | 19 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.95 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 6.5 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 12 | U | 12 | 12 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 2.8 | U | 2.8 | 2.8 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.54 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.83 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.95 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.53 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473692**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 07:52 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58400 SDG#: PH193-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 27 | J | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 110 | | 18 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.1 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 30 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 48 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 21 | | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 25 | | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,600 | | 41.9 | 7.55 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.19 | U | 4.19 | 0.775 | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.07 | | 4.19 | 0.733 | 1 |
| 06946 | Barium | 7440-39-3 | 97.4 | | 1.05 | 0.0346 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.638 | J | 1.05 | 0.0702 | 1 |
| 07914 | Boron | 7440-42-8 | 5.41 | J | 10.5 | 0.880 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.26 | | 1.05 | 0.0796 | 1 |
| 01650 | Calcium | 7440-70-2 | 7,920 | | 20.9 | 3.50 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.4 | | 3.14 | 0.168 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.32 | | 1.05 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 37.5 | | 2.09 | 0.304 | 1 |
| 01654 | Iron | 7439-89-6 | 22,900 | | 41.9 | 3.79 | 1 |
| 06955 | Lead | 7439-92-1 | 17.2 | | 3.14 | 0.524 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.6 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,050 | | 10.5 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 323 | | 1.05 | 0.0869 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.348 | J | 2.09 | 0.178 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473692**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 07:52 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58400 SDG#: PH193-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06961 | Nickel | 7440-02-0 | 17.4 | | 2.09 | 0.136 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 483 | | 10.5 | 3.03 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,650 | | 105 | 8.73 | 1 |
| 01667 | Sodium | 7440-23-5 | 101 | J | 105 | 17.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.63 | J | 10.5 | 0.230 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.05 | 0.178 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.1 | | 1.05 | 0.136 | 1 |
| 06972 | Zinc | 7440-66-6 | 148 | | 4.19 | 0.209 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.63 | J | 5.24 | 0.880 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.239 | J | 0.419 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 3.33 | | 0.209 | 0.0272 | 2 |
| 06144 | Strontium | 7440-24-6 | 42.4 | | 0.419 | 0.0712 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.309 | | 0.209 | 0.0314 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.121 | | 0.0164 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.02 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473692**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 07:52 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58400 SDG#: PH193-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.106 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.35 | J | 5.08 | 0.142 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 7.75 | B | 5.08 | 0.0804 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 40.2 | | 5.08 | 0.0869 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 17.5 | | 5.08 | 0.0791 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 936 | B | 5.08 | 0.232 | 1 |
| 11031 | OCDD | 3268-87-9 | 8,880 | EB | 10.2 | 0.150 | 1 |
| 11650 | 2378-TCDF-Conf | 51207-31-9 | 1.64 | C | 1.02 | 0.152 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 4.19 | JB | 5.08 | 0.0694 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.79 | JB | 5.08 | 0.0647 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 4.34 | J | 5.08 | 0.105 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.11 | B | 5.08 | 0.102 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 1.62 | JB | 5.08 | 0.118 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 7.64 | B | 5.08 | 0.0965 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 114 | B | 5.08 | 0.0616 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 19.3 | B | 5.08 | 0.0839 | 1 |
| 11031 | OCDF | 39001-02-0 | 289 | B | 10.2 | 0.0512 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 27.0 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDF-Conf | 73 | 24 - 169 |
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 94 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 97 | 17 - 157 |
| 13C12-12378-PeCDF | 103 | 24 - 185 |
| 13C12-23478-PeCDF | 103 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 81 | 26 - 138 |
| 13C12-OCDF | 80 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473692**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 07:52 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58400 SDG#: PH193-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473692**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 07:52 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58400 SDG#: PH193-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 11:41 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 20:18 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 21:28 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 04:09 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 20:10 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 06:05 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/03/2014 14:02 | Joseph D Anderson | 1 |
| 11650 | Dioxins/Furans in Solids-Conf | EPA 1613B October 1994 | 1 | 14149004 | 06/04/2014 05:46 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473692**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 07:52 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58400 SDG#: PH193-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:42 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:16 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:16 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:16 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:16 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:54 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-584-SA5D-SB-4.0-5.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7473693**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:10 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58440 SDG#: PH193-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.89 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13031 | Formaldehyde | 50-00-0 | 2,100 | U | 2,100 | 1,300 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473693**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:10 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58440 SDG#: PH193-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,400 | | 42.1 | 7.60 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.21 | U | 4.21 | 0.780 | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.61 | | 4.21 | 0.738 | 1 |
| 06946 | Barium | 7440-39-3 | 82.1 | | 1.05 | 0.0348 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.449 | J | 1.05 | 0.0706 | 1 |
| 07914 | Boron | 7440-42-8 | 3.20 | J | 10.5 | 0.885 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.490 | J | 1.05 | 0.0801 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,010 | | 21.1 | 3.52 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.6 | | 3.16 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.93 | | 1.05 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 11.3 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 21,700 | | 42.1 | 3.81 | 1 |
| 06955 | Lead | 7439-92-1 | 2.56 | J | 3.16 | 0.527 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.9 | | 4.2 | 0.36 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473693**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:10 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58440 SDG#: PH193-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 4,440 | | 10.5 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 456 | | 1.05 | 0.0875 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.11 | U | 2.11 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.6 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 390 | | 10.5 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,240 | | 105 | 8.79 | 1 |
| 01667 | Sodium | 7440-23-5 | 145 | | 105 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.44 | J | 10.5 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,140 | | 1.05 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.3 | | 1.05 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 51.0 | | 4.21 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.17 | J | 5.27 | 0.885 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.165 | J | 0.421 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 0.211 | U | 0.211 | 0.0274 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.9 | | 0.421 | 0.0717 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.293 | | 0.211 | 0.0316 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0165 | U | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.91 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.5 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473693**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:10 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58440 SDG#: PH193-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 U | 1.04 | 0.0701 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0676 JQ | 5.19 | 0.0402 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0551 JBQ | 5.19 | 0.0294 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.126 JQ | 5.19 | 0.0311 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0748 JQ | 5.19 | 0.0302 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.912 JBQ | 5.19 | 0.0343 | 1 |
| 11031 | OCDD | 3268-87-9 | 7.55 JB | 10.4 | 0.0291 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 U | 1.04 | 0.0624 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0726 JBQ | 5.19 | 0.0247 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0643 JBQ | 5.19 | 0.0245 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0490 JQ | 5.19 | 0.0277 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0578 JBQ | 5.19 | 0.0242 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0572 JB | 5.19 | 0.0313 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0479 JB | 5.19 | 0.0255 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.136 JBQ | 5.19 | 0.0155 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0753 JBQ | 5.19 | 0.0281 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.543 JB | 10.4 | 0.0434 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0129 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 92 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 83 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 101 | 24 - 185 |
| 13C12-23478-PeCDF | 93 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 104 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473693**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:10 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58440 SDG#: PH193-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473693**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:10 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58440 SDG#: PH193-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 08:30 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 08:31 | Marie D Beamenderfer | 22.89 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234587 | 05/22/2014 19:03 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234587 | 05/22/2014 19:04 | Lisa J Cooke | n.a. |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 20:26 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 21:42 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 04:27 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 03:39 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 01:48 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/03/2014 14:59 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-584-SA5D-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473693**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 08:10 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58440 SDG#: PH193-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:46 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:18 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:18 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:18 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:18 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:56 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473694**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:25 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58600 SDG#: PH193-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.0 | J | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.2 | J | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.2 | J | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.72 | J | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.3 | J | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.77 | J | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.0 | J | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.89 | J | 1.7 | 0.70 | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13031 | Formaldehyde | 50-00-0 | 21,000 | U | 21,000 | 13,000 | 1 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473694**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:25 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58600 SDG#: PH193-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 11 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 22 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,200 | | 41.4 | 7.46 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.14 | U | 4.14 | 0.766 | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.90 | | 4.14 | 0.724 | 1 |
| 06946 | Barium | 7440-39-3 | 124 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.909 | J | 1.03 | 0.0693 | 1 |
| 07914 | Boron | 7440-42-8 | 4.32 | J | 10.3 | 0.869 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.701 | J | 1.03 | 0.0786 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,220 | | 20.7 | 3.46 | 1 |
| 06951 | Chromium | 7440-47-3 | 30.1 | | 3.10 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.40 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 18.6 | | 2.07 | 0.300 | 1 |
| 01654 | Iron | 7439-89-6 | 33,100 | | 82.8 | 7.49 | 2 |
| 06955 | Lead | 7439-92-1 | 9.26 | | 3.10 | 0.517 | 1 |
| 01656 | Lithium | 7439-93-2 | 30.5 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,690 | | 10.3 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 407 | | 1.03 | 0.0859 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.800 | J | 2.07 | 0.176 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473694**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:25 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58600 SDG#: PH193-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06961 | Nickel | 7440-02-0 | 21.6 | | 2.07 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 576 | | 10.3 | 2.99 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,530 | | 103 | 8.63 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 103 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.65 | J | 10.3 | 0.228 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,220 | | 1.03 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 50.0 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 81.3 | | 4.14 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 6.83 | | 5.17 | 0.869 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.243 | J | 0.414 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.207 | U | 0.207 | 0.0269 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.6 | | 0.414 | 0.0704 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.374 | | 0.207 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0173 | U | 0.0173 | 0.0104 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.17 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.4 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473694**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:25 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58600 SDG#: PH193-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0430 JB | 1.01 | 0.0136 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.314 J | 5.05 | 0.0181 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0749 JB | 5.05 | 0.0158 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.15 J | 5.05 | 0.0159 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 1.52 J | 5.05 | 0.0156 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.59 JB | 5.05 | 0.0150 | 1 |
| 11031 | OCDD | 3268-87-9 | 39.2 B | 10.1 | 0.0148 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0941 J | 1.01 | 0.0147 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.531 JB | 5.05 | 0.00750 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.180 JB | 5.05 | 0.00758 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.107 J | 5.05 | 0.0170 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.175 JB | 5.05 | 0.0141 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 1.88 JB | 5.05 | 0.0176 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0953 JB | 5.05 | 0.0140 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.439 JB | 5.05 | 0.00525 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0828 JB | 5.05 | 0.0103 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.34 JB | 10.1 | 0.00971 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.981 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 59 | 25 - 164 |
| 13C12-12378-PeCDD | 68 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 73 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 72 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 71 | 24 - 185 |
| 13C12-23478-PeCDF | 65 | 21 - 178 |
| 13C12-123478-HxCDF | 64 | 26 - 152 |
| 13C12-123678-HxCDF | 71 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 65 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 53 | 26 - 138 |
| 13C12-OCDF | 45 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473694**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:25 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58600 SDG#: PH193-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473694**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:25 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58600 SDG#: PH193-07

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 09:02 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 20:43 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 21:56 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 04:46 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 18:01 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 02:09 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/04/2014 17:54 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 22:37 | John W Yanzuk II | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473694**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:25 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58600 SDG#: PH193-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:50 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:20 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:20 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:20 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:20 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 19:58 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402A | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473695**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:32 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58620 SDG#: PH193-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.65 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13031 | Formaldehyde | 50-00-0 | 2,100 | U | 2,100 | 1,300 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 0.99 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473695**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:32 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58620 SDG#: PH193-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,300 | | 40.0 | 7.21 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.00 | U | 4.00 | 0.740 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.75 | | 4.00 | 0.700 | 1 |
| 06946 | Barium | 7440-39-3 | 84.5 | | 1.00 | 0.0330 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.313 | J | 1.00 | 0.0670 | 1 |
| 07914 | Boron | 7440-42-8 | 2.56 | J | 10.0 | 0.840 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.458 | J | 1.00 | 0.0760 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,920 | | 20.0 | 3.34 | 1 |
| 06951 | Chromium | 7440-47-3 | 28.0 | | 3.00 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.11 | | 1.00 | 0.0990 | 1 |
| 06953 | Copper | 7440-50-8 | 10.3 | | 2.00 | 0.290 | 1 |
| 01654 | Iron | 7439-89-6 | 19,000 | | 40.0 | 3.62 | 1 |
| 06955 | Lead | 7439-92-1 | 2.99 | J | 3.00 | 0.500 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.0 | | 4.0 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473695**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:32 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58620 SDG#: PH193-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01657 | Magnesium | 7439-95-4 | 5,110 | | 10.0 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 239 | | 1.00 | 0.0830 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.174 | J | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 21.1 | | 2.00 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 439 | | 10.0 | 2.89 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,630 | | 100 | 8.34 | 1 |
| 01667 | Sodium | 7440-23-5 | 101 | | 100 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.40 | J | 10.0 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 1.00 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.9 | | 1.00 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.2 | | 4.00 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.93 | J | 5.00 | 0.840 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.400 | U | 0.400 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 0.200 | U | 0.200 | 0.0260 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.0 | | 0.400 | 0.0680 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.268 | | 0.200 | 0.0300 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0164 | U | 0.0164 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.64 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.7 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.8 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473695**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:32 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58620 SDG#: PH193-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.00908 JBQ | 1.02 | 0.00729 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0245 JQ | 5.11 | 0.00653 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0289 JBQ | 5.11 | 0.00863 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0356 J | 5.11 | 0.00865 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0395 J | 5.11 | 0.00889 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.149 JB | 5.11 | 0.00760 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.984 JB | 10.2 | 0.00694 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 U | 1.02 | 0.00531 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0427 JB | 5.11 | 0.00319 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.11 U | 5.11 | 0.00338 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0367 JQ | 5.11 | 0.00533 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0391 JBQ | 5.11 | 0.00459 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0388 JBQ | 5.11 | 0.00576 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0315 JB | 5.11 | 0.00489 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0609 JB | 5.11 | 0.00241 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0332 JB | 5.11 | 0.00434 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.174 JB | 10.2 | 0.00610 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0147 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 73 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 100 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 59 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473695**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:32 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58620 SDG#: PH193-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473695**
**LL Group # 1476433**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:32 by RR

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58620 SDG#: PH193-08

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 09:34 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 09:08 | Marie D Beamenderfer | 24.65 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234587 | 05/22/2014 19:05 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234587 | 05/22/2014 19:05 | Lisa J Cooke | n.a. |
| 13031 | 25a Formaldehyde by EPA 8315A | SW-846 8315A | 1 | 141470006A | 05/28/2014 20:51 | Jessica L Miller | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141430013A | 05/28/2014 22:10 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 05:04 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141430013A | 05/24/2014 04:15 | Olivia Arosemena | 1 |
| 05876 | Formaldehyde Solid Extraction | SW-846 8315A | 1 | 141470006A | 05/27/2014 15:30 | Wanda F Oswald | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 04:01 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 02:31 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14149004 | 06/04/2014 18:51 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14149004 | 05/29/2014 12:00 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-586-SA5D-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7473695**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 10:32 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58620 SDG#: PH193-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:54 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:23 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:23 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:23 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:23 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 20:00 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402B | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473696**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:14 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62300 SDG#: PH193-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.8 | J | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 20 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 17:39 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 02:52 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473697**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:21 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62340 SDG#: PH193-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.76 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 09:46 | Marie D Beamenderfer | 23.76 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234587 | 05/22/2014 19:06 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234587 | 05/22/2014 19:06 | Lisa J Cooke | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 04:23 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 03:13 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473698**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:41 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62390 SDG#: PH193-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 11 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.85 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473698**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:41 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62390 SDG#: PH193-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,400 | | 41.3 | 7.44 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.13 | U | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 8.12 | | 4.13 | 0.722 | 1 |
| 06946 | Barium | 7440-39-3 | 68.4 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.598 | J | 1.03 | 0.0691 | 1 |
| 07914 | Boron | 7440-42-8 | 4.68 | J | 10.3 | 0.867 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.463 | J | 1.03 | 0.0784 | 1 |
| 01650 | Calcium | 7440-70-2 | 8,130 | | 20.6 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 16.1 | | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.63 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 8.83 | | 2.06 | 0.299 | 1 |
| 01654 | Iron | 7439-89-6 | 21,600 | | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 4.67 | | 3.10 | 0.516 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,170 | | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 298 | | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.453 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.20 | | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 252 | | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,820 | | 103 | 8.61 | 1 |
| 01667 | Sodium | 7440-23-5 | 80.4 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.82 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 756 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 32.5 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 53.1 | | 4.13 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.26 | J | 5.16 | 0.867 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.413 | U | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.206 | U | 0.206 | 0.0268 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.8 | | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.289 | | 0.206 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0164 | U | 0.0164 | 0.0098 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473698**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:41 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62390 SDG#: PH193-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.3 C. | n.a. | 8.09 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.0 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 10:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 10:24 | Marie D Beamenderfer | 23.85 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234587 | 05/22/2014 19:07 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234587 | 05/22/2014 19:07 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 05:22 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 04:44 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 03:35 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473698**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:41 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62390 SDG#: PH193-11

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 13:58 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:25 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:25 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:25 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:25 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 20:02 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402B | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473699**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:56 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62314 SDG#: PH193-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.15 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473699**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:56 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62314 SDG#: PH193-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,200 | | 42.6 | 7.67 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.26 | U | 4.26 | 0.787 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.59 | | 4.26 | 0.745 | 1 |
| 06946 | Barium | 7440-39-3 | 89.8 | | 1.06 | 0.0351 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.616 | J | 1.06 | 0.0713 | 1 |
| 07914 | Boron | 7440-42-8 | 5.90 | J | 10.6 | 0.894 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.487 | J | 1.06 | 0.0809 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,050 | | 21.3 | 3.55 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.3 | | 3.19 | 0.170 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.49 | | 1.06 | 0.105 | 1 |
| 06953 | Copper | 7440-50-8 | 9.58 | | 2.13 | 0.309 | 1 |
| 01654 | Iron | 7439-89-6 | 22,800 | | 42.6 | 3.85 | 1 |
| 06955 | Lead | 7439-92-1 | 4.74 | | 3.19 | 0.532 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.6 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,880 | | 10.6 | 1.78 | 1 |
| 06958 | Manganese | 7439-96-5 | 378 | | 1.06 | 0.0883 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.396 | J | 2.13 | 0.181 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.6 | | 2.13 | 0.138 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 295 | | 10.6 | 3.07 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,280 | | 106 | 8.87 | 1 |
| 01667 | Sodium | 7440-23-5 | 252 | | 106 | 17.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.91 | J | 10.6 | 0.234 | 1 |
| 06970 | Titanium | 7440-32-6 | 892 | | 1.06 | 0.181 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.6 | | 1.06 | 0.138 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.6 | | 4.26 | 0.213 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.11 | J | 5.32 | 0.894 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.426 | U | 0.426 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0306 | J | 0.213 | 0.0277 | 2 |
| 06144 | Strontium | 7440-24-6 | 31.9 | | 0.426 | 0.0723 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.280 | | 0.213 | 0.0319 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0169 | U | 0.0169 | 0.0101 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-623-SA8-SB-14.0-15.0 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7473699**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:56 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62314 SDG#: PH193-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.4 C. | n.a. | 8.61 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 6.0 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 10:38 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 11:02 | Marie D Beamenderfer | 25.15 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234587 | 05/22/2014 19:08 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234587 | 05/22/2014 19:08 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 05:41 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 05:06 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 03:56 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473699**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 13:56 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62314 SDG#: PH193-12

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:02 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:28 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:28 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:28 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:28 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 20:04 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402B | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473700**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:14 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62319 SDG#: PH193-13*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.25 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473700**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:14 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62319 SDG#: PH193-13*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,000 | | 41.0 | 7.39 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.758 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.81 | | 4.10 | 0.717 | 1 |
| 06946 | Barium | 7440-39-3 | 55.5 | | 1.02 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.457 | J | 1.02 | 0.0686 | 1 |
| 07914 | Boron | 7440-42-8 | 5.60 | J | 10.2 | 0.861 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.454 | J | 1.02 | 0.0779 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,790 | | 20.5 | 3.42 | 1 |
| 06951 | Chromium | 7440-47-3 | 13.9 | | 3.07 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.47 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 6.49 | | 2.05 | 0.297 | 1 |
| 01654 | Iron | 7439-89-6 | 20,000 | | 41.0 | 3.71 | 1 |
| 06955 | Lead | 7439-92-1 | 2.96 | J | 3.07 | 0.512 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.5 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,360 | | 10.2 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 275 | | 1.02 | 0.0850 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.339 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 7.06 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 224 | | 10.2 | 2.96 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,010 | | 102 | 8.54 | 1 |
| 01667 | Sodium | 7440-23-5 | 278 | | 102 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.77 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 911 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 30.6 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 48.7 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.01 | J | 5.12 | 0.861 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.410 | U | 0.410 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.205 | U | 0.205 | 0.0266 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.2 | | 0.410 | 0.0697 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.259 | | 0.205 | 0.0307 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0166 | U | 0.0166 | 0.0099 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-623-SA8-SB-19.0-20.0 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7473700**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:14 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62319 SDG#: PH193-13*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.4 C. | n.a. | 8.80 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.3 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14143SLD026 | 05/28/2014 11:09 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14143SLD026 | 05/25/2014 18:15 | Nicholas W Shroyer | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147B16A | 05/29/2014 11:39 | Marie D Beamenderfer | 25.25 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414234587 | 05/22/2014 19:01 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414234587 | 05/22/2014 19:01 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440034A | 05/28/2014 05:59 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440034A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440032A | 05/28/2014 05:28 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141440033A | 05/30/2014 04:18 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141440033A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141440032A | 05/27/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-623-SA8-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7473700**
**LL Group # 1476433**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/21/2014 14:14 by RR

Submitted: 05/22/2014 09:25
Reported: 06/06/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62319 SDG#: PH193-13*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06953 | Copper | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637003 | 05/30/2014 14:06 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637003B | 05/28/2014 21:30 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:30 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:30 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637003A | 05/28/2014 21:30 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638001 | 06/04/2014 20:06 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637003 | 05/28/2014 08:00 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638001 | 06/01/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14142039402B | 05/22/2014 21:20 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401A | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14143SLD026 | Sample number(s): 7473686-7473688,7473690-7473695,7473698-7473700 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 121* | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 84 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 111 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 95 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 93 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 113 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 108 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 80-119 | | |
| Batch number: 14147B16A | Sample number(s): 7473691,7473693,7473695,7473697-7473700 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 88 | | 67-120 | | |
| Batch number: 14149A94A | Sample number(s): 7473685 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 96 | 95 | 80-133 | 1 | 30 |
| Batch number: 141470006A | Sample number(s): 7473686-7473688,7473690-7473695 | | | | | | | | | |
| Formaldehyde | 2,000 U | | 2,000. | 1,200 | ug/kg | 101 | | 68-122 | | |
| Batch number: 141430013A | Sample number(s): 7473686-7473688,7473690-7473695 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 62 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 72 | | 55-135 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 81 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 78 | | 56-138 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 107 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 88 | | 59-137 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 90 | | 68-134 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 82 | | 56-128 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 103 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 88 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 85 | | 61-125 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 98 | | 69-126 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 73 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 90 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 112 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141440034A | Sample number(s): 7473686-7473688,7473690-7473695,7473698-7473700 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 91 | 92 | 36-106 | 1 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 100 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 107 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141440032A | Sample number(s): 7473686-7473688,7473690-7473700 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 95 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 84 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 77 | | 60-115 | | |
| Batch number: 141440033A | Sample number(s): 7473686-7473688,7473690-7473700 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 101 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 104 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 104 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 91 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 77 | | 60-115 | | |
| Batch number: 141470637003 | Sample number(s): 7473686-7473695,7473698-7473700 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 114 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 104 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 105 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 104 | | 80-120 | | |
| Boron | 1.59 | J | 10.0 | 0.840 | mg/kg | 104 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 105 | | 80-120 | | |
| Calcium | 27.9 | | 20.0 | 3.34 | mg/kg | 114 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 106 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 108 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 110 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 105 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 106 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 106 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 107 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 108 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 107 | | 80-120 | | |
| Tin | 1.57 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 107 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 109 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 104 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141470637003A | Sample number(s): 7473686-7473695,7473698-7473700 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 105 | | 80-120 | | |
| Strontium | 0.125 | J | 0.400 | 0.0680 | mg/kg | 111 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141470637003B | Sample number(s): 7473686-7473695,7473698-7473700 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 110 | | 80-120 | | |
| Batch number: 141480638001 | Sample number(s): 7473686-7473695,7473698-7473700 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 86 | | 85-120 | | |
| Batch number: 14142039402A | Sample number(s): 7473686,7473689-7473694 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14142039402B | Sample number(s): 7473695,7473698-7473700 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14148162401A | Sample number(s): 7473686-7473700 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14149004 | Sample number(s): 7473686-7473688,7473690-7473695 | | | | | | | | | |
| 2378-TCDD | 0.0770 | J | 1.00 | 0.0464 | ng/kg | 97 | | 67-158 | | |
| 12378-PeCDD | 5.00 | U | 5.00 | 0.0245 | ng/kg | 100 | | 70-142 | | |
| 123478-HxCDD | 0.0301 | J | 5.00 | 0.0178 | ng/kg | 97 | | 70-164 | | |
| 123678-HxCDD | 5.00 | U | 5.00 | 0.0185 | ng/kg | 97 | | 76-134 | | |
| 123789-HxCDD | 5.00 | U | 5.00 | 0.0172 | ng/kg | 97 | | 64-162 | | |
| 1234678-HpCDD | 0.138 | J | 5.00 | 0.0201 | ng/kg | 94 | | 70-140 | | |
| OCDD | 0.831 | J | 10.0 | 0.0191 | ng/kg | 92 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0394 | ng/kg | 107 | | 75-158 | | |
| 2378-TCDF-Conf | 1.00 | U | 1.00 | 0.0322 | ng/kg | 107 | | 75-158 | | |
| 12378-PeCDF | 0.0624 | J | 5.00 | 0.0153 | ng/kg | 97 | | 80-134 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 23478-PeCDF | 0.0410 J | 5.00 | 0.0156 | ng/kg | 97 | | 68-160 | | |
| 123478-HxCDF | 5.00 U | 5.00 | 0.0171 | ng/kg | 94 | | 72-134 | | |
| 123678-HxCDF | 0.0424 J | 5.00 | 0.0148 | ng/kg | 94 | | 84-130 | | |
| 123789-HxCDF | 0.0302 J | 5.00 | 0.0180 | ng/kg | 95 | | 78-130 | | |
| 234678-HxCDF | 0.0252 J | 5.00 | 0.0159 | ng/kg | 93 | | 70-156 | | |
| 1234678-HpCDF | 0.0309 J | 5.00 | 0.00716 | ng/kg | 90 | | 82-122 | | |
| 1234789-HpCDF | 0.0568 J | 5.00 | 0.0125 | ng/kg | 94 | | 78-138 | | |
| OCDF | 0.119 J | 10.0 | 0.0371 | ng/kg | 92 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00360 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14143SLD026 | Sample number(s): 7473686-7473688,7473690-7473695,7473698-7473700 UNSPK: 7473686 | | | | | | | | |
| Acenaphthene | 106 | 99 | 48-127 | 7 | 30 | | | | |
| Acenaphthylene | 97 | 93 | 60-128 | 4 | 30 | | | | |
| Anthracene | 106 | 96 | 52-126 | 9 | 30 | | | | |
| Benzo(a)anthracene | 119 | 91 | 44-143 | 23 | 30 | | | | |
| Benzo(a)pyrene | 100 | 73 | 49-137 | 25 | 30 | | | | |
| Benzo(b)fluoranthene | 127 | 71 | 26-142 | 38* | 30 | | | | |
| Benzo(e)pyrene | 105 | 50* | 63-111 | 47* | 30 | | | | |
| Benzo(g,h,i)perylene | 72 | 22* | 33-141 | 63* | 30 | | | | |
| Benzo(k)fluoranthene | 106 | 85 | 49-144 | 19 | 30 | | | | |
| Butylbenzylphthalate | 112 | 111 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 93 | 91 | 52-147 | 2 | 30 | | | | |
| Chrysene | 99 | 56 | 43-141 | 37* | 30 | | | | |
| Dibenz(a,h)anthracene | 68 | 62 | 25-145 | 8 | 30 | | | | |
| Diethylphthalate | 100 | 97 | 66-140 | 2 | 30 | | | | |
| Dimethylphthalate | 90 | 84 | 70-123 | 7 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 50 | 100 | 48-164 | 29 | 30 | | | | |
| Fluoranthene | 115 | 73 | 38-153 | 34* | 30 | | | | |
| Fluorene | 81 | 82 | 57-130 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 92 | 29 | 26-139 | 65* | 30 | | | | |
| 1-Methylnaphthalene | 90 | 84 | 59-139 | 6 | 30 | | | | |
| 2-Methylnaphthalene | 96 | 88 | 46-147 | 8 | 30 | | | | |
| Naphthalene | 94 | 87 | 52-136 | 8 | 30 | | | | |
| N-Nitrosodimethylamine | 88 | 85 | 39-134 | 4 | 30 | | | | |
| Di-n-octylphthalate | 136 | 235* | 52-162 | 54* | 30 | | | | |
| Phenanthrene | 115 | 75 | 50-137 | 34* | 30 | | | | |
| Pyrene | 91 | 65 | 26-143 | 26 | 30 | | | | |
| Batch number: 14147B16A | Sample number(s): 7473691,7473693,7473695,7473697-7473700 UNSPK: P471505 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 76 | 79 | 69-123 | 1 | 30 | | | | |
| Batch number: 141470006A | Sample number(s): 7473686-7473688,7473690-7473695 UNSPK: 7473686 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Formaldehyde | 98 | 99 | 62-126 | 2 | 50 | | | | | | |
| Batch number: 141430013A | Sample number(s): 7473686-7473688,7473690-7473695 UNSPK: 7473686 | | | | | | | | | | |
| Aldrin | 85 | 74 | 16-126 | 14 | 50 | | | | | | |
| Alpha BHC | 83 | 72 | 14-140 | 15 | 50 | | | | | | |
| Beta BHC | 93 | 86 | 42-133 | 8 | 50 | | | | | | |
| Gamma BHC - Lindane | 88 | 77 | 30-137 | 13 | 50 | | | | | | |
| p,p-DDD | 114 | 94 | 43-149 | 19 | 50 | | | | | | |
| p,p-DDE | 104 | 63 | 35-152 | 35 | 50 | | | | | | |
| p,p-DDT | 76 | 0* | 12-193 | 54* | 50 | | | | | | |
| Delta BHC | 103 | 90 | 13-153 | 13 | 50 | | | | | | |
| Dieldrin | 105 | 87 | 41-153 | 20 | 50 | | | | | | |
| Endosulfan I | 90 | 78 | 26-146 | 14 | 50 | | | | | | |
| Endosulfan II | 100 | 81 | 34-141 | 21 | 50 | | | | | | |
| Endosulfan Sulfate | 98 | 86 | 10-181 | 13 | 50 | | | | | | |
| Endrin | 91 | 82 | 30-152 | 11 | 50 | | | | | | |
| Endrin Aldehyde | 91 | 73 | 23-138 | 22 | 50 | | | | | | |
| Endrin Ketone | 87 | 77 | 30-148 | 13 | 50 | | | | | | |
| Heptachlor | 86 | 75 | 16-152 | 13 | 50 | | | | | | |
| Heptachlor Epoxide | 110 | 85 | 33-144 | 26 | 50 | | | | | | |
| Methoxychlor | 109 | 95 | 41-161 | 13 | 50 | | | | | | |
| Batch number: 141440034A | Sample number(s): 7473686-7473688,7473690-7473695,7473698-7473700 UNSPK: 7473686 | | | | | | | | | | |
| PCB-1016 | 73 | 85 | 41-135 | 15 | 50 | | | | | | |
| PCB-1260 | 89 | 87 | 40-134 | 3 | 50 | | | | | | |
| Batch number: 141440032A | Sample number(s): 7473686-7473688,7473690-7473700 UNSPK: 7473686 | | | | | | | | | | |
| EFH (C12-C14) | 101 | 97 | 49-123 | 4 | 20 | | | | | | |
| EFH (C15-C20) | 140* | 120 | 49-123 | 16 | 20 | | | | | | |
| EFH (C21-C30) | 353* | 130* | 49-123 | 75* | 20 | | | | | | |
| EFH (C30-C40) | 484* | 156* | 49-123 | 76* | 20 | | | | | | |
| EFH (C8-C11) | 97 | 90 | 49-123 | 7 | 20 | | | | | | |
| Batch number: 141440033A | Sample number(s): 7473686-7473688,7473690-7473700 UNSPK: 7473686 | | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 81 | 70 | 49-123 | 14 | 20 | | | | | | |
| EFH C15-C20 w/ SiGel | 90 | 75 | 49-123 | 18 | 20 | | | | | | |
| EFH C21-C30 w/ SiGel | 196* | 74 | 49-123 | 79* | 20 | | | | | | |
| EFH C30-C40 w/ SiGel | 216* | 72 | 49-123 | 80* | 20 | | | | | | |
| EFH C8-C11 w/ SiGel | 67 | 55 | 49-123 | 18 | 20 | | | | | | |
| Batch number: 141470637003 | Sample number(s): 7473686-7473695,7473698-7473700 UNSPK: 7473686 BKG: 7473686 | | | | | | | | | | |
| Aluminum | 2775 (2) | 5957 (2) | 75-125 | 25* | 20 | 15,400 | | 16,400 | | 6 | 20 |
| Antimony | 43* | 27* | 75-125 | 46* | 20 | 4.00 | U | 4.00 | U | 0 (1) | 20 |
| Arsenic | 117 | 122 | 75-125 | 2 | 20 | 5.99 | | 7.10 | | 17 (1) | 20 |
| Barium | 108 | 128* | 75-125 | 11 | 20 | 88.8 | | 96.5 | | 8 | 20 |
| Beryllium | 104 | 110 | 75-125 | 3 | 20 | 0.561 | J | 0.590 | J | 5 (1) | 20 |
| Boron | 99 | 97 | 75-125 | 3 | 20 | 4.86 | J | 4.24 | J | 14 (1) | 20 |
| Cadmium | 115 | 102 | 75-125 | 13 | 20 | 0.558 | J | 0.707 | J | 24* (1) | 20 |
| Calcium | 191 (2) | 284 (2) | 75-125 | 9 | 20 | 3,040 | | 3,210 | | 6 | 20 |
| Chromium | 120 | 145* | 75-125 | 9 | 20 | 22.3 | | 22.8 | | 2 | 20 |
| Cobalt | 108 | 106 | 75-125 | 4 | 20 | 4.88 | | 5.67 | | 15 (1) | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Copper | 120 | 114 | 75-125 | 5 | 20 | 15.2 | 16.0 | 5 | 20 |
| Iron | 3043 (2) | 11499 (2) | 75-125 | 31* | 20 | 19,100 | 21,700 | 13 | 20 |
| Lead | 124 | 80 | 75-125 | 25* | 20 | 11.3 | 11.9 | 5 (1) | 20 |
| Lithium | 104 | 111 | 75-125 | 3 | 20 | 20.9 | 23.6 | 12 | 20 |
| Magnesium | 365 (2) | 902 (2) | 75-125 | 19 | 20 | 4,070 | 4,490 | 10 | 20 |
| Manganese | 280 (2) | 632 (2) | 75-125 | 39* | 20 | 206 | 230 | 11 | 20 |
| Molybdenum | 102 | 93 | 75-125 | 11 | 20 | 0.401 J | 0.361 J | 10 (1) | 20 |
| Nickel | 113 | 110 | 75-125 | 4 | 20 | 13.3 | 14.7 | 10 | 20 |
| Phosphorus | 158* | 154* | 75-125 | 1 | 20 | 332 | 387 | 15 | 20 |
| Potassium | 177* | 254* | 75-125 | 13 | 20 | 3,400 | 3,700 | 8 | 20 |
| Sodium | 103 | 104 | 75-125 | 1 | 20 | 86.3 J | 96.2 J | 11 (1) | 20 |
| Tin | 96 | 87 | 75-125 | 11 | 20 | 2.13 J | 2.43 J | 13 (1) | 20 |
| Titanium | 420 (2) | 599 (2) | 75-125 | 11 | 20 | 975 | 1,020 | 4 | 20 |
| Vanadium | 118 | 141* | 75-125 | 10 | 20 | 35.1 | 37.8 | 7 | 20 |
| Zinc | 190* | 82 | 75-125 | 36* | 20 | 83.4 | 91.8 | 10 | 20 |
| Zirconium | 97 | 97 | 75-125 | 2 | 20 | 4.20 J | 5.01 | 18 (1) | 20 |
| Batch number: 141470637003A | Sample number(s): 7473686-7473695,7473698-7473700 UNSPK: 7473686 BKG: 7473686 | | | | | | | | |
| Silver | 103 | 100 | 75-125 | 5 | 20 | 0.352 | 0.493 | 33* (1) | 20 |
| Strontium | 147* | 195* | 75-125 | 10 | 20 | 23.1 | 22.9 | 1 | 20 |
| Thallium | 114 | 120 | 75-125 | 2 | 20 | 0.284 | 0.261 | 8 (1) | 20 |
| Batch number: 141470637003B | Sample number(s): 7473686-7473695,7473698-7473700 UNSPK: 7473686 BKG: 7473686 | | | | | | | | |
| Selenium | 99 | 96 | 75-125 | 5 | 20 | 0.173 J | 0.147 J | 16 (1) | 20 |
| Batch number: 141480638001 | Sample number(s): 7473686-7473695,7473698-7473700 UNSPK: 7473686 BKG: 7473686 | | | | | | | | |
| 3a Mercury 7471A | 96 | 118 | 65-135 | 14 | 20 | 0.0559 | 0.0505 | 10 (1) | 20 |
| Batch number: 14142039402A | Sample number(s): 7473686,7473689-7473694 BKG: 7473686 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.24 | 7.22 | 0 | 3 |
| Batch number: 14142039402B | Sample number(s): 7473695,7473698-7473700 BKG: 7473700 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.80 | 8.78 | 0 | 3 |
| Batch number: 14148162401A | Sample number(s): 7473686-7473700 BKG: 7473686 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 5.4 | 5.6 | 4 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 5.4 | 5.6 | 4 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 5.4 | 5.6 | 4 | 20 |
| Batch number: 14149004 | Sample number(s): 7473686-7473688,7473690-7473695 UNSPK: 7473686 | | | | | | | | |
| 2378-TCDD | 99 | 100 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDD | 99 | 100 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDD | 96 | 98 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 95 | 91 | 40-135 | 4 | 20 | | | | |
| 123789-HxCDD | 95 | 94 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDD | 129 | -26* | 40-135 | 82* | 20 | | | | |
| OCDD | 166 (2) | -605 (2) | 40-135 | 133* | 20 | | | | |
| 2378-TCDF | 98 | 98 | 40-135 | 1 | 20 | | | | |
| 2378-TCDF-Conf | 98 | 98 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDF | 97 | 97 | 40-135 | 1 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 23478-PeCDF | 96 | 97 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 94 | 95 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 94 | 97 | 40-135 | 4 | 20 | | | | |
| 123789-HxCDF | 92 | 94 | 40-135 | 4 | 20 | | | | |
| 234678-HxCDF | 95 | 96 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDF | 98 | 80 | 40-135 | 16 | 20 | | | | |
| 1234789-HpCDF | 94 | 91 | 40-135 | 2 | 20 | | | | |
| OCDF | 96 | 69 | 40-135 | 24* | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14143SLD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7473686 | 99 | 100 | 82 |
| 7473687 | 100 | 104 | 84 |
| 7473688 | 95 | 107 | 84 |
| 7473690 | 92 | 92 | 79 |
| 7473691 | 92 | 104 | 79 |
| 7473692 | 92 | 95 | 78 |
| 7473693 | 97 | 109 | 85 |
| 7473694 | 98 | 101 | 87 |
| 7473695 | 98 | 107 | 87 |
| 7473698 | 98 | 110 | 87 |
| 7473699 | 97 | 111 | 88 |
| 7473700 | 100 | 111 | 86 |
| Blank | 104 | 114 | 93 |
| LCS | 102 | 114 | 90 |
| MS | 100 | 104 | 84 |
| MSD | 95 | 107 | 84 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14147B16A

| | Trifluorotoluene-F |
|---|---|
| 7473691 | 78 |
| 7473693 | 77 |
| 7473695 | 80 |
| 7473697 | 87 |
| 7473698 | 76 |
| 7473699 | 84 |
| 7473700 | 83 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

## Surrogate Quality Control

| | |
|---|---|
| Blank | 98 |
| LCS | 101 |
| MS | 90 |
| MSD | 83 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14149A94A

| | Trifluorotoluene-F |
|---|---|
| 7473685 | 83 |
| Blank | 82 |
| LCS | 91 |
| LCSD | 90 |
| Limits: | 63-135 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141430013A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7473686 | 69 | 93 |
| 7473687 | 75 | 98 |
| 7473688 | 63 | 82 |
| 7473690 | 71 | 93 |
| 7473691 | 64 | 81 |
| 7473692 | 73 | 104 |
| 7473693 | 65 | 84 |
| 7473694 | 78 | 87 |
| 7473695 | 78 | 102 |
| Blank | 60 | 100 |
| LCS | 63 | 106 |
| MS | 75 | 98 |
| MSD | 63 | 82 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141440034A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7473686 | 90 | 95 |
| 7473687 | 84 | 94 |
| 7473688 | 96 | 98 |
| 7473690 | 98 | 102 |
| 7473691 | 97 | 96 |
| 7473692 | 90 | 94 |
| 7473693 | 103 | 107 |
| 7473694 | 87 | 92 |
| 7473695 | 111 | 110 |
| 7473698 | 104 | 108 |
| 7473699 | 97 | 107 |
| 7473700 | 106 | 113 |
| Blank | 112 | 122* |
| LCS | 110 | 120 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| LCSD | 104 | 116 |
| MS | 84 | 94 |
| MSD | 96 | 98 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 25a Formaldehyde by EPA 8315A
Batch number: 141470006A

| | Butyraldehyde |
|---|---|
| 7473686 | 114 |
| 7473687 | 115 |
| 7473688 | 115 |
| 7473690 | 126 |
| 7473691 | 111 |
| 7473692 | 120 |
| 7473693 | 115 |
| 7473694 | 125 |
| 7473695 | 118 |
| Blank | 109 |
| LCS | 113 |
| MS | 115 |
| MSD | 115 |
| Limits: | 64-126 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141440032A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7473686 | 77 | 96 |
| 7473687 | 82 | 101 |
| 7473688 | 80 | 98 |
| 7473690 | 96 | 100 |
| 7473691 | 84 | 89 |
| 7473692 | 78 | 92 |
| 7473693 | 87 | 93 |
| 7473694 | 84 | 103 |
| 7473695 | 80 | 94 |
| 7473696 | 75 | 90 |
| 7473697 | 85 | 91 |
| 7473698 | 84 | 101 |
| 7473699 | 86 | 93 |
| 7473700 | 88 | 96 |
| Blank | 82 | 96 |
| LCS | 87 | 95 |
| MS | 82 | 101 |
| MSD | 80 | 98 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141440033A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7473686 | 75 | 85 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7473687 | 73 | 80 |
| 7473688 | 63 | 76 |
| 7473690 | 72 | 83 |
| 7473691 | 74 | 83 |
| 7473692 | 82 | 98 |
| 7473693 | 74 | 83 |
| 7473694 | 72 | 83 |
| 7473695 | 78 | 89 |
| 7473696 | 69 | 77 |
| 7473697 | 74 | 86 |
| 7473698 | 71 | 84 |
| 7473699 | 81 | 91 |
| 7473700 | 75 | 84 |
| Blank | 79 | 87 |
| LCS | 92 | 107 |
| MS | 73 | 80 |
| MSD | 63 | 76 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14149004

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7473686 | 84 | 88 | 81 | 81 | 83 | 80 |
| 7473687 | 82 | 93 | 85 | 86 | 87 | 96 |
| 7473688 | 85 | 94 | 88 | 90 | 101 | 98 |
| 7473690 | 84 | 94 | 84 | 84 | 87 | 91 |
| 7473691 | 83 | 95 | 87 | 90 | 92 | 96 |
| 7473692 | 83 | 94 | 89 | 88 | 91 | 91 |
| 7473693 | 77 | 92 | 86 | 86 | 86 | 87 |
| 7473694 | 59 | 68 | 73 | 73 | 73 | 72 |
| 7473695 | 65 | 73 | 82 | 84 | 83 | 84 |
| Blank | 74 | 87 | 82 | 83 | 84 | 82 |
| MS | 82 | 93 | 85 | 86 | 87 | 96 |
| MSD | 85 | 94 | 88 | 90 | 101 | 98 |
| OPR | 72 | 79 | 73 | 73 | 73 | 67 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7473686 | 76 | 90 | 96 | 94 | 79 | 83 |
| 7473687 | 99 | 87 | 99 | 99 | 79 | 85 |
| 7473688 | 92 | 90 | 101 | 98 | 85 | 91 |
| 7473690 | 89 | 87 | 99 | 100 | 81 | 84 |
| 7473691 | 93 | 85 | 102 | 95 | 76 | 88 |
| 7473692 | 97 | | 103 | 103 | 84 | 88 |
| 7473693 | 83 | 79 | 101 | 93 | 73 | 84 |
| 7473694 | 65 | 56 | 71 | 65 | 64 | 71 |
| 7473695 | 76 | 63 | 77 | 69 | 72 | 81 |
| Blank | 71 | 72 | 90 | 83 | 72 | 84 |
| MS | 99 | 87 | 99 | 99 | 79 | 85 |
| MSD | 92 | 90 | 101 | 98 | 85 | 91 |
| OPR | 56 | 70 | 82 | 77 | 64 | 74 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476433
Reported: 06/06/14 at 12:21 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | 13C12-2378-TCDF-Conf |
| 7473686 | 81 | 82 | 84 | 75 | 69 | |
| 7473687 | 83 | 86 | 99 | 82 | 79 | |
| 7473688 | 87 | 83 | 103 | 77 | 67 | |
| 7473690 | 83 | 88 | 94 | 83 | 80 | |
| 7473691 | 83 | 75 | 111 | 68 | 57 | |
| 7473692 | 87 | 85 | 96 | 81 | 80 | 73 |
| 7473693 | 78 | 75 | 104 | 65 | 55 | |
| 7473694 | 69 | 65 | 88 | 53 | 45 | |
| 7473695 | 76 | 71 | 100 | 64 | 59 | |
| Blank | 76 | 72 | 98 | 61 | 51 | 57 |
| MS | 83 | 86 | 99 | 82 | 79 | 87 |
| MSD | 87 | 83 | 103 | 77 | 67 | 90 |
| OPR | 68 | 61 | 81 | 50 | 40 | 70 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | 24-169 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

A-13013
G-1476433
S-7473685-700

**CDM Smith**

DateShipped: 5/21/2014
CarrierName: FedEx
AirbillNo: 770058142099

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140521-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB1-052114 | 5/21/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | For all EFH, silica gel |
| FDG2-SL-585-SA5D-SB-0.0-0.5M | 5/21/14 09:06 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | X | | | | | | X | | | | | | | | clean up required on one half |
| FDG2-SL-585-SA5D-SB-0.0-0.5M | 5/21/14 09:06 | SO | None | 3 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | the extract. Analyze both |
| FDG2-SL-885-SA5D-SB-0.0-0.5 | 5/21/14 09:16 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | X | | | | | | X | | | | | | | | extracts for EFH. |
| FDG2-SL-885-SA5D-SB-0.0-0.5 | 5/21/14 09:16 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-585-SA5D-SB-4.0-5.0 | 5/21/14 09:21 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | X | | | | | | | | |
| FDG2-SL-584-SA5D-SB-0.0-0.5 | 5/21/14 07:52 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | X | | | | | | X | | | | | | | | |
| FDG2-SL-584-SA5D-SB-0.0-0.5 | 5/21/14 07:52 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-584-SA5D-SB-4.0-5.0 | 5/21/14 08:10 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | X | | | | | | | | |
| FDG2-SL-586-SA5D-SB-0.0-0.5 | 5/21/14 10:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | | X | | | X | | | | | | X | | | | | | | | |
| FDG2-SL-586-SA5D-SB-0.0-0.5 | 5/21/14 10:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-586-SA5D-SB-2.0-3.0 | 5/21/14 10:32 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | X | | | | | | | | |
| FDG2-SL-586-SA5D-SB-2.0-3.0 | 5/21/14 10:32 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-584-SA5D-SB-4.0-5.0 | 5/21/14 08:10 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-585-SA5D-SB-4.0-5.0 | 5/21/14 09:21 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-623-SA8-SB-4.0-5.0 | 5/21/14 13:21 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-623-SA8-SB-9.0-10.0 | 5/21/14 13:41 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-623-SA8-SB-14.0-15.0 | 5/21/14 13:56 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-623-SA8-SB-19.0-20.0 | 5/21/14 14:14 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-623-SA8-SB-0.0-0.5 | 5/21/14 13:14 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

FINAL DATA GAP BLOCK 2



Received by: [signature] 5/22/14 0925

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/21/2014

CarrierName: FedEx

AirbillNo: 770058142099

A-13013
G-1476433
S-747368S-700

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140521-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Randall Roberson

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/21/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/22/14 | 0925 |

FINAL DATA GAP BLOCK 2

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/21/2014
CarrierName: FedEx
AirbillNo: 770058142099

A-13013
G-1476433
S-747385-700

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140521-08
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FDG2-SL-623-SA8-SB-4.0-5.0 | 5/21/14 13:21 | SO | None | 1 - 16 oz glass | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | For all EFH, silica gel clean up |
| FDG2-SL-623-SA8-SB-9.0-10.0 | 5/21/14 13:41 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | required on half the extract. |
| FDG2-SL-623-SA8-SB-14.0-15.0 | 5/21/14 13:56 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | Analyze all the extract for EFH. |
| FDG2-SL-623-SA8-SB-19.0-20.0 | 5/21/14 14:14 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Randy Roberts

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Randy Roberts | 5/21/2014 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/22/14 | 0925 |

Final data gap block 2

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15293

Group Number(s): 1476433

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/22/2014 9:25 |
| Number of Packages: | 4 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | No | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:54 on 05/22/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 0.8 | DT | Wet | Y | Bagged | N | N |
| 3 | DT131 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 4 | DT131 | 1.0 | DT | Wet | Y | Bagged | N | N |

## Sample Date/Time Discrepancy Details

| Sample ID on COC | Date/Time on Label | Comments |
|---|---|---|
| FDG2-SL-584SA5D-SB-4.0-5.0 | 5/21/2014 08:18 | 1 16 oz. container |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

REVISED

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 17, 2014

Project: SSFL Phase 3 Sampling

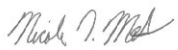
Submittal Date: 05/23/2014
Group Number: 1476755
SDG: PH194
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-052214 Water | 7475236 |
| SVL-511-SA5D-4.5-5.5 Soil | 7475237 |
| SVL-511-SA5D-4.5-5.5MS Soil | 7475238 |
| SVL-511-SA5D-4.5-5.5MSD Soil | 7475239 |
| SVL-811-SA5D-4.5-5.5 Soil | 7475240 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

REVISED

**Sample Description: TB2-052214 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7475236**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:00 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB2-- SDG#: PH194-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: TB2-052214 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7475236**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:00 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB2-- SDG#: PH194-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 13:50 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 13:50 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475237**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.88 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.88 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.88 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.88 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.88 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.88 |
| 10237 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 20 | 0.88 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.88 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.88 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.88 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.88 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.88 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.88 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.88 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.88 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.88 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.88 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.88 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.88 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.88 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475237**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.88 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.88 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.88 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.88 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.88 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.88 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.88 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.88 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.88 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.88 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.88 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.88 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 11.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 07:04 | Stephanie A Selis | 0.88 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475237**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:45 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401B | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475238**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 180 | 21 | 8 | 0.95 |
| 10237 | Acrolein | 107-02-8 | 140 | 110 | 21 | 0.95 |
| 10237 | Acrylonitrile | 107-13-1 | 81 | 21 | 4 | 0.95 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 18 | 5 | 1 | 0.95 |
| 10237 | Benzene | 71-43-2 | 22 | 5 | 0.5 | 0.95 |
| 10237 | Bromobenzene | 108-86-1 | 23 | 5 | 1 | 0.95 |
| 10237 | Bromochloromethane | 74-97-5 | 25 | 5 | 1 | 0.95 |
| 10237 | Bromodichloromethane | 75-27-4 | 21 | 5 | 1 | 0.95 |
| 10237 | Bromoform | 75-25-2 | 20 | 5 | 1 | 0.95 |
| 10237 | Bromomethane | 74-83-9 | 26 | 5 | 2 | 0.95 |
| 10237 | 2-Butanone | 78-93-3 | 140 | 11 | 4 | 0.95 |
| 10237 | t-Butyl alcohol | 75-65-0 | 200 | 54 | 21 | 0.95 |
| 10237 | n-Butylbenzene | 104-51-8 | 25 | 5 | 1 | 0.95 |
| 10237 | sec-Butylbenzene | 135-98-8 | 23 | 5 | 1 | 0.95 |
| 10237 | tert-Butylbenzene | 98-06-6 | 23 | 5 | 1 | 0.95 |
| 10237 | Carbon Disulfide | 75-15-0 | 17 | 5 | 1 | 0.95 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 23 | 5 | 1 | 0.95 |
| 10237 | Chlorobenzene | 108-90-7 | 22 | 5 | 1 | 0.95 |
| 10237 | Chloroethane | 75-00-3 | 24 | 5 | 2 | 0.95 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 16 | 11 | 2 | 0.95 |
| 10237 | Chloroform | 67-66-3 | 24 | 5 | 1 | 0.95 |
| 10237 | 1-Chlorohexane | 544-10-5 | 23 | 5 | 1 | 0.95 |
| 10237 | Chloromethane | 74-87-3 | 22 | 5 | 2 | 0.95 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 23 | 5 | 1 | 0.95 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 23 | 5 | 1 | 0.95 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 21 | 5 | 2 | 0.86 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 17 | 5 | 2 | 0.95 |
| 10237 | Dibromochloromethane | 124-48-1 | 21 | 5 | 1 | 0.95 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 20 | 5 | 1 | 0.95 |
| 10237 | Dibromomethane | 74-95-3 | 20 | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 24 | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 23 | 5 | 1 | 0.95 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 23 | 5 | 1 | 0.95 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 23 | 5 | 2 | 0.95 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 22 | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 23 | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 24 | 5 | 1 | 0.95 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 22 | 5 | 1 | 0.95 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 24 | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 21 | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 20 | 5 | 1 | 0.95 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 20 | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 23 | 5 | 1 | 0.95 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 19 | 5 | 1 | 0.95 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 18 | 5 | 1 | 0.95 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 18 | 5 | 1 | 0.95 |
| 10237 | Ethylbenzene | 100-41-4 | 22 | 5 | 1 | 0.95 |
| 10237 | Freon 113 | 76-13-1 | 22 | 5 | 2 | 0.95 |
| 10237 | Freon 133a | 75-88-7 | 23 | 5 | 2 | 0.86 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 27 | 5 | 2 | 0.95 |
| 10237 | 2-Hexanone | 591-78-6 | 80 | 11 | 3 | 0.95 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475238**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 20 | 5 | 1 | 0.95 |
| 10237 | Isopropylbenzene | 98-82-8 | 23 | 5 | 1 | 0.95 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 22 | 5 | 1 | 0.95 |
| 10237 | Methyl Iodide | 74-88-4 | 23 | 5 | 3 | 0.95 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 18 | 5 | 0.5 | 0.95 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 80 | 11 | 3 | 0.95 |
| 10237 | Methylene Chloride | 75-09-2 | 23 | 5 | 2 | 0.95 |
| 10237 | n-Propylbenzene | 103-65-1 | 24 | 5 | 1 | 0.95 |
| 10237 | Styrene | 100-42-5 | 23 | 5 | 1 | 0.95 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 22 | 5 | 1 | 0.95 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 19 | 5 | 1 | 0.95 |
| 10237 | Tetrachloroethene | 127-18-4 | 29 | 5 | 1 | 0.95 |
| 10237 | Toluene | 108-88-3 | 22 | 5 | 1 | 0.95 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 22 | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 22 | 5 | 1 | 0.95 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 21 | 5 | 1 | 0.95 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 21 | 5 | 1 | 0.95 |
| 10237 | Trichloroethene | 79-01-6 | 23 | 5 | 1 | 0.95 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 25 | 5 | 2 | 0.95 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 20 | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 22 | 5 | 1 | 0.95 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 23 | 5 | 1 | 0.95 |
| 10237 | Vinyl Acetate | 108-05-4 | 45 | 10 | 2 | 0.86 |
| 10237 | Vinyl Chloride | 75-01-4 | 24 | 5 | 1 | 0.95 |
| 10237 | m+p-Xylene | 179601-23-1 | 45 | 5 | 1 | 0.95 |
| 10237 | o-Xylene | 95-47-6 | 22 | 5 | 1 | 0.95 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 11.6 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 07:27 | Stephanie A Selis | 0.95 |
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 08:12 | Stephanie A Selis | 0.86 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5MS Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475238**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:47 | Mitchell R Washel | n.a. |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401B | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475239**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 190 | 21 | 7 | 0.94 |
| 10237 | Acrolein | 107-02-8 | 110 | 110 | 21 | 0.94 |
| 10237 | Acrylonitrile | 107-13-1 | 88 | 21 | 4 | 0.94 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 18 | 5 | 1 | 0.94 |
| 10237 | Benzene | 71-43-2 | 20 | 5 | 0.5 | 0.94 |
| 10237 | Bromobenzene | 108-86-1 | 20 | 5 | 1 | 0.94 |
| 10237 | Bromochloromethane | 74-97-5 | 23 | 5 | 1 | 0.94 |
| 10237 | Bromodichloromethane | 75-27-4 | 19 | 5 | 1 | 0.94 |
| 10237 | Bromoform | 75-25-2 | 19 | 5 | 1 | 0.94 |
| 10237 | Bromomethane | 74-83-9 | 24 | 5 | 2 | 0.94 |
| 10237 | 2-Butanone | 78-93-3 | 150 | 11 | 4 | 0.94 |
| 10237 | t-Butyl alcohol | 75-65-0 | 190 | 53 | 21 | 0.94 |
| 10237 | n-Butylbenzene | 104-51-8 | 16 | 5 | 1 | 0.94 |
| 10237 | sec-Butylbenzene | 135-98-8 | 19 | 5 | 1 | 0.94 |
| 10237 | tert-Butylbenzene | 98-06-6 | 18 | 5 | 1 | 0.94 |
| 10237 | Carbon Disulfide | 75-15-0 | 15 | 5 | 1 | 0.94 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 21 | 5 | 1 | 0.94 |
| 10237 | Chlorobenzene | 108-90-7 | 20 | 5 | 1 | 0.94 |
| 10237 | Chloroethane | 75-00-3 | 23 | 5 | 2 | 0.94 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 16 | 11 | 2 | 0.94 |
| 10237 | Chloroform | 67-66-3 | 22 | 5 | 1 | 0.94 |
| 10237 | 1-Chlorohexane | 544-10-5 | 19 | 5 | 1 | 0.94 |
| 10237 | Chloromethane | 74-87-3 | 20 | 5 | 2 | 0.94 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 19 | 5 | 1 | 0.94 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 18 | 5 | 1 | 0.94 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 21 | 5 | 2 | 0.89 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 16 | 5 | 2 | 0.94 |
| 10237 | Dibromochloromethane | 124-48-1 | 19 | 5 | 1 | 0.94 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 19 | 5 | 1 | 0.94 |
| 10237 | Dibromomethane | 74-95-3 | 20 | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 19 | 5 | 1 | 0.94 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 18 | 5 | 1 | 0.94 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 18 | 5 | 1 | 0.94 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 22 | 5 | 2 | 0.94 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 20 | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 22 | 5 | 1 | 0.94 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 22 | 5 | 1 | 0.94 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 21 | 5 | 1 | 0.94 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 22 | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 20 | 5 | 1 | 0.94 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 19 | 5 | 1 | 0.94 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 19 | 5 | 1 | 0.94 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 21 | 5 | 1 | 0.94 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 18 | 5 | 1 | 0.94 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 17 | 5 | 1 | 0.94 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 19 | 5 | 1 | 0.94 |
| 10237 | Ethylbenzene | 100-41-4 | 19 | 5 | 1 | 0.94 |
| 10237 | Freon 113 | 76-13-1 | 19 | 5 | 2 | 0.94 |
| 10237 | Freon 133a | 75-88-7 | 23 | 5 | 2 | 0.89 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 16 | 5 | 2 | 0.94 |
| 10237 | 2-Hexanone | 591-78-6 | 86 | 11 | 3 | 0.94 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475239**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 19 | 5 | 1 | 0.94 |
| 10237 | Isopropylbenzene | 98-82-8 | 19 | 5 | 1 | 0.94 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 17 | 5 | 1 | 0.94 |
| 10237 | Methyl Iodide | 74-88-4 | 21 | 5 | 3 | 0.94 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 19 | 5 | 0.5 | 0.94 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 88 | 11 | 3 | 0.94 |
| 10237 | Methylene Chloride | 75-09-2 | 21 | 5 | 2 | 0.94 |
| 10237 | n-Propylbenzene | 103-65-1 | 19 | 5 | 1 | 0.94 |
| 10237 | Styrene | 100-42-5 | 19 | 5 | 1 | 0.94 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 20 | 5 | 1 | 0.94 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 18 | 5 | 1 | 0.94 |
| 10237 | Tetrachloroethene | 127-18-4 | 24 | 5 | 1 | 0.94 |
| 10237 | Toluene | 108-88-3 | 19 | 5 | 1 | 0.94 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 16 | 5 | 1 | 0.94 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 16 | 5 | 1 | 0.94 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 20 | 5 | 1 | 0.94 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 20 | 5 | 1 | 0.94 |
| 10237 | Trichloroethene | 79-01-6 | 21 | 5 | 1 | 0.94 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 22 | 5 | 2 | 0.94 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 19 | 5 | 1 | 0.94 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 18 | 5 | 1 | 0.94 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 18 | 5 | 1 | 0.94 |
| 10237 | Vinyl Acetate | 108-05-4 | 40 | 10 | 2 | 0.89 |
| 10237 | Vinyl Chloride | 75-01-4 | 21 | 5 | 1 | 0.94 |
| 10237 | m+p-Xylene | 179601-23-1 | 37 | 5 | 1 | 0.94 |
| 10237 | o-Xylene | 95-47-6 | 19 | 5 | 1 | 0.94 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 11.6 | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 12.3 | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 07:49 | Stephanie A Selis | 0.94 |
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 08:34 | Stephanie A Selis | 0.89 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-511-SA5D-4.5-5.5MSD Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475239**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5115D SDG#: PH194-02MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:49 | Mitchell R Washel | n.a. |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401B | 05/28/2014 20:40 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401B | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-811-SA5D-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475240**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:35 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

8115D SDG#: PH194-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.95 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.95 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.95 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.95 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.95 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.95 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.95 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.95 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-811-SA5D-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475240**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:35 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

8115D SDG#: PH194-03*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.95 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.95 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.95 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.95 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.95 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.95 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 11.5 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 08:57 | Stephanie A Selis | 0.95 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-811-SA5D-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7475240**
**LL Group # 1476755**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:35 by VV

Submitted: 05/23/2014 09:50
Reported: 06/17/2014 16:37

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

8115D SDG#: PH194-03*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414334606 | 05/23/2014 19:52 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414334606 | 05/23/2014 19:51 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401B | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476755
Reported: 06/17/14 at 04:37 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7475237-7475240 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 108 | 112 | 41-149 | 3 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 92 | 88 | 50-137 | 5 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 91 | 88 | 58-123 | 3 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 86 | 88 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 96 | 93 | 80-120 | 3 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 120 | 117 | 75-129 | 2 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 96 | 95 | 75-120 | 1 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 102 | 96 | 70-126 | 6 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 109 | 108 | 32-162 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 98 | 99 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 93 | 99 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 95 | 93 | 72-120 | 2 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 97 | 93 | 69-120 | 4 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 94 | 95 | 75-120 | 1 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 73 | 71 | 63-128 | 3 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 98 | 96 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 100 | 95 | 80-120 | 5 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 102 | 101 | 17-171 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 87 | 90 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 108 | 106 | 80-120 | 2 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 91 | 85 | 70-130 | 6 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 89 | 85 | 56-120 | 4 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 93 | 93 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 94 | 96 | 79-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 95 | 89 | 22-131 | 6 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 79 | 90 | 50-132 | 13 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 99 | 95 | 77-120 | 4 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 80-120 | 2 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 75-120 | 2 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 98 | 80-120 | 5 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 102 | 80-120 | 10 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 74 | 71 | 26-137 | 5 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 96 | 71-122 | 2 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 110 | 108 | 66-136 | 1 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 103 | 100 | 73-129 | 3 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 100 | 80-120 | 4 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 106 | 103 | 79-120 | 3 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 96 | 97 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 73-120 | 1 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 90 | 88 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476755
Reported: 06/17/14 at 04:37 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 100 | 96 | 77-120 | 4 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 74-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 88 | 86 | 69-120 | 2 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 88 | 89 | 59-134 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 98 | 94 | 80-120 | 4 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 74 | 71 | 64-137 | 3 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 118 | 113 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 105 | 105 | 46-130 | 0 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 86 | 85 | 40-129 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 68-128 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 101 | 97 | 76-120 | 4 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 89 | 88 | 69-120 | 2 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 102 | 99 | 72-130 | 3 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 93 | 91 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 91 | 92 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 104 | 103 | 80-124 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 96 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 101 | 96 | 76-120 | 4 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 95 | 80-120 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 86 | 93 | 71-123 | 8 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 106 | 103 | 78-120 | 3 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 94 | 89 | 80-120 | 5 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 105 | 100 | 64-120 | 5 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 97 | 99 | 68-120 | 3 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 63-135 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 100 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 102 | 101 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 91 | 86 | 58-133 | 5 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 94 | 100 | 71-123 | 6 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 79-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 94 | 95 | 78-120 | 2 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 74 | 70 | 40-127 | 6 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | 92 | 59-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | 97 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 97 | 94 | 80-120 | 3 | 30 |
| Batch number: Y141471AA | Sample number(s): 7475236 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476755
Reported: 06/17/14 at 04:37 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476755
Reported: 06/17/14 at 04:37 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14148162401B | Sample number(s): 7475237-7475240 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7475237-7475240 UNSPK: 7475237 | | | | | | | | |
| Acetone | 109 | 118 | 31-195 | 7 | 30 | | | | |
| Acrolein | 87 | 71 | 10-165 | 22 | 30 | | | | |
| Acrylonitrile | 75 | 82 | 48-139 | 8 | 30 | | | | |
| t-Amyl methyl ether | 83 | 85 | 50-132 | 2 | 30 | | | | |
| Benzene | 101 | 94 | 55-143 | 8 | 30 | | | | |
| Bromobenzene | 109 | 92 | 43-139 | 18 | 30 | | | | |
| Bromochloromethane | 118 | 110 | 60-137 | 8 | 30 | | | | |
| Bromodichloromethane | 98 | 91 | 53-136 | 8 | 30 | | | | |
| Bromoform | 94 | 91 | 50-144 | 4 | 30 | | | | |
| Bromomethane | 121 | 111 | 42-168 | 9 | 30 | | | | |
| 2-Butanone | 85 | 93 | 37-163 | 8 | 30 | | | | |
| t-Butyl alcohol | 95 | 88 | 47-153 | 8 | 30 | | | | |
| n-Butylbenzene | 115 | 76 | 30-146 | 42* | 30 | | | | |
| sec-Butylbenzene | 109 | 88 | 33-157 | 23 | 30 | | | | |
| tert-Butylbenzene | 108 | 86 | 41-152 | 23 | 30 | | | | |
| Carbon Disulfide | 78 | 71 | 48-146 | 9 | 30 | | | | |
| Carbon Tetrachloride | 109 | 100 | 51-165 | 9 | 30 | | | | |
| Chlorobenzene | 105 | 93 | 49-135 | 13 | 30 | | | | |
| Chloroethane | 114 | 106 | 39-152 | 8 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 73 | 76 | 32-139 | 3 | 30 | | | | |
| Chloroform | 111 | 105 | 61-142 | 7 | 30 | | | | |
| 1-Chlorohexane | 106 | 89 | 70-130 | 18 | 30 | | | | |
| Chloromethane | 102 | 93 | 36-143 | 9 | 30 | | | | |
| 2-Chlorotoluene | 105 | 88 | 42-146 | 18 | 30 | | | | |
| 4-Chlorotoluene | 108 | 85 | 39-145 | 24 | 30 | | | | |
| Chlorotrifluoroethene | 109 | 105 | 70-130 | 0 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 79 | 74 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 97 | 90 | 51-128 | 8 | 30 | | | | |
| 1,2-Dibromoethane | 95 | 91 | 54-129 | 5 | 30 | | | | |
| Dibromomethane | 95 | 93 | 57-130 | 3 | 30 | | | | |
| 1,2-Dichlorobenzene | 111 | 89 | 36-133 | 24 | 30 | | | | |
| 1,3-Dichlorobenzene | 108 | 86 | 34-134 | 24 | 30 | | | | |
| 1,4-Dichlorobenzene | 108 | 83 | 35-136 | 27 | 30 | | | | |
| Dichlorodifluoromethane | 106 | 102 | 26-151 | 5 | 30 | | | | |
| 1,1-Dichloroethane | 100 | 95 | 63-142 | 7 | 30 | | | | |
| 1,2-Dichloroethane | 108 | 104 | 54-143 | 5 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476755
Reported: 06/17/14 at 04:37 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 111 | 105 | 61-149 | 6 | 30 | | | | |
| cis-1,2-Dichloroethene | 103 | 98 | 67-135 | 6 | 30 | | | | |
| trans-1,2-Dichloroethene | 111 | 103 | 64-144 | 9 | 30 | | | | |
| 1,2-Dichloropropane | 97 | 93 | 54-144 | 6 | 30 | | | | |
| 1,3-Dichloropropane | 94 | 89 | 51-140 | 6 | 30 | | | | |
| 2,2-Dichloropropane | 94 | 88 | 53-147 | 8 | 30 | | | | |
| 1,1-Dichloropropene | 106 | 97 | 54-145 | 10 | 30 | | | | |
| cis-1,3-Dichloropropene | 88 | 86 | 45-137 | 3 | 30 | | | | |
| trans-1,3-Dichloropropene | 85 | 82 | 51-134 | 5 | 30 | | | | |
| Ethyl t-butyl ether | 85 | 87 | 58-124 | 2 | 30 | | | | |
| Ethylbenzene | 102 | 91 | 44-141 | 13 | 30 | | | | |
| Freon 113 | 102 | 91 | 56-156 | 12 | 30 | | | | |
| Freon 133a | 118 | 116 | 61-131 | 2 | 30 | | | | |
| Hexachlorobutadiene | 127 | 75 | 10-155 | 53* | 30 | | | | |
| 2-Hexanone | 74 | 81 | 32-160 | 8 | 30 | | | | |
| di-Isopropyl ether | 91 | 90 | 59-133 | 3 | 30 | | | | |
| Isopropylbenzene | 108 | 89 | 38-144 | 21 | 30 | | | | |
| p-Isopropyltoluene | 103 | 79 | 29-152 | 28 | 30 | | | | |
| Methyl Iodide | 106 | 99 | 52-139 | 8 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 86 | 90 | 55-129 | 4 | 30 | | | | |
| 4-Methyl-2-pentanone | 75 | 82 | 46-139 | 9 | 30 | | | | |
| Methylene Chloride | 107 | 100 | 60-149 | 7 | 30 | | | | |
| n-Propylbenzene | 111 | 88 | 39-157 | 23 | 30 | | | | |
| Styrene | 105 | 90 | 35-134 | 16 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 101 | 92 | 55-139 | 11 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 88 | 87 | 29-182 | 2 | 30 | | | | |
| Tetrachloroethene | 134 | 112 | 42-149 | 19 | 30 | | | | |
| Toluene | 102 | 87 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 104 | 75 | 10-140 | 33* | 30 | | | | |
| 1,2,4-Trichlorobenzene | 102 | 73 | 10-136 | 33* | 30 | | | | |
| 1,1,1-Trichloroethane | 99 | 93 | 52-146 | 7 | 30 | | | | |
| 1,1,2-Trichloroethane | 99 | 95 | 58-152 | 5 | 30 | | | | |
| Trichloroethene | 105 | 97 | 53-144 | 9 | 30 | | | | |
| Trichlorofluoromethane | 116 | 104 | 47-163 | 12 | 30 | | | | |
| 1,2,3-Trichloropropane | 95 | 91 | 36-180 | 5 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 104 | 86 | 37-149 | 20 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 109 | 87 | 38-150 | 24 | 30 | | | | |
| Vinyl Acetate | 46 | 40 | 21-139 | 12 | 30 | | | | |
| Vinyl Chloride | 111 | 100 | 50-154 | 11 | 30 | | | | |
| m+p-Xylene | 104 | 88 | 44-137 | 18 | 30 | | | | |
| o-Xylene | 101 | 89 | 42-137 | 14 | 30 | | | | |
| Batch number: 14148162401B | Sample number(s): 7475237-7475240 | | | | | BKG: 7475237 | | | |
| 14a Moisture Content by 160.3 | | | | | | 11.6 | 12.3 | 6 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 11.6 | 12.3 | 6 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 11.6 | 12.3 | 6 | 20 |

## Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476755
Reported: 06/17/14 at 04:37 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141491AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7475237 | 106 | 102 | 97 | 94 |
| 7475238 | 104 | 98 | 103 | 100 |
| 7475239 | 106 | 105 | 102 | 102 |
| 7475240 | 105 | 107 | 97 | 92 |
| Blank | 109 | 104 | 97 | 94 |
| LCS | 106 | 105 | 97 | 109 |
| LCSD | 106 | 103 | 98 | 102 |
| MS | 104 | 98 | 103 | 100 |
| MSD | 106 | 105 | 102 | 102 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7475236 | 102 | 102 | 99 | 95 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/22/2014
CarrierName: FedEx
AirbillNo: 770073250078

A-13013
G-1476755
S-7475236-40

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140522-03
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-052214 | 5/22/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-511-SA5D-SB-4.5-5.5MS | 5/22/14 08:30 | SO | None | 9 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-511-SA5D-SB-4.5-5.5MS | 5/22/14 08:30 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-811-SA5D-SB-4.5-5.5 | 5/22/14 08:35 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-811-SA5D-SB-4.5-5.5 | 5/22/14 08:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Va Vathavorn

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stacy Mycoles | 5/22/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Brandy Ray | 5.23.14 | 950 |

Soil Vapor

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15429

Group Number(s): 1476755

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/23/2014 9:50 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:58 on 05/23/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.6 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.0 | DT | Wet | Y | Bagged | N | N |
| 3 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/23/2014
Group Number: 1476783
SDG: PH195
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB3-052214 Water | 7475533 |
| SL-730-SA5A-TR-0.5 Soil | 7475534 |
| SL-730-SA5A-TR-6.0 Soil | 7475535 |
| SL-587-SA5A-TR-0.5 Soil | 7475536 |
| SL-587-SA5A-TR-5.5 Soil | 7475537 |
| SL-587-SA5A-TR-5.5MS Soil | 7475538 |
| SL-587-SA5A-TR-5.5MSD Soil | 7475539 |
| SL-587-SA5A-TR-5.5DUP Soil | 7475540 |
| SL-887-SA5A-TR-5.5 Soil | 7475541 |
| EB3-052214 Water | 7475542 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475533**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:00

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

3-TB- SDG#: PH195-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/29/2014 23:46 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/29/2014 23:46 | Miranda P Tillinghast | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475534**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:56 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.55 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.9 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 6.2 | J | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 7.1 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 16 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.9 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.1 | | 1.7 | 0.68 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 41 | | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 44 | | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475534**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:56 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 10 | U | 10 | 4.1 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 10 | U | 10 | 4.1 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 18 | | 10 | 4.1 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 50 | | 20 | 8.2 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 10 | U | 10 | 4.1 | 2 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.1 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,700 | | 40.2 | 7.24 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.02 | U | 4.02 | 0.743 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.09 | J | 4.02 | 0.703 | 1 |
| 06946 | Barium | 7440-39-3 | 98.4 | | 1.00 | 0.0331 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.628 | J | 1.00 | 0.0673 | 1 |
| 07914 | Boron | 7440-42-8 | 5.72 | J | 10.0 | 0.844 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.697 | J | 1.00 | 0.0763 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,600 | | 20.1 | 3.36 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.0 | | 3.01 | 0.161 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.73 | | 1.00 | 0.0994 | 1 |
| 06953 | Copper | 7440-50-8 | 11.0 | | 2.01 | 0.291 | 1 |
| 01654 | Iron | 7439-89-6 | 18,700 | | 40.2 | 3.64 | 1 |
| 06955 | Lead | 7439-92-1 | 16.2 | | 3.01 | 0.502 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.5 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,100 | | 10.0 | 1.68 | 1 |
| 06958 | Manganese | 7439-96-5 | 295 | | 1.00 | 0.0834 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.455 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.71 | | 2.01 | 0.131 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 341 | | 10.0 | 2.90 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,660 | | 100 | 8.38 | 1 |
| 01667 | Sodium | 7440-23-5 | 83.0 | J | 100 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.89 | J | 10.0 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,130 | | 1.00 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.2 | | 1.00 | 0.131 | 1 |
| 06972 | Zinc | 7440-66-6 | 123 | | 4.02 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.39 | J | 5.02 | 0.844 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.237 | J | 0.402 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 2.47 | | 0.201 | 0.0261 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.9 | | 0.402 | 0.0683 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.233 | | 0.201 | 0.0301 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0409 | | 0.0166 | 0.0099 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475534**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:56 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.9 C. | n.a. | 6.36 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.4 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475534**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:56 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.99 | B | 1.02 | 0.0491 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.885 | JB | 5.08 | 0.0472 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 1.21 | JB | 5.08 | 0.0422 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 3.68 | JB | 5.08 | 0.0435 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 2.33 | JB | 5.08 | 0.0397 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 90.2 | B | 5.08 | 0.0827 | 1 |
| 11031 | OCDD | 3268-87-9 | 1,050 | B | 10.2 | 0.0515 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.863 | JB | 1.02 | 0.100 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 1.95 | JBQ | 5.08 | 0.0412 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 1.37 | JB | 5.08 | 0.0408 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 1.34 | JB | 5.08 | 0.0521 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.55 | JB | 5.08 | 0.0467 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.692 | JB | 5.08 | 0.0551 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 1.63 | JB | 5.08 | 0.0499 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 23.4 | B | 5.08 | 0.0291 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 2.29 | JB | 5.08 | 0.0430 | 1 |
| 11031 | OCDF | 39001-02-0 | 68.2 | B | 10.2 | 0.0301 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 6.11 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 85 | 25 - 164 |
| 13C12-12378-PeCDD | 93 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 90 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 95 | 24 - 169 |
| 13C12-12378-PeCDF | 102 | 24 - 185 |
| 13C12-23478-PeCDF | 96 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 96 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475534**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:56 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475534**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:56 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 08:42 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 08:45 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 20:45 | Heather E Williams | 2 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/31/2014 01:10 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 11:08 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:10 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:10 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:20 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475534**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:56 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:21 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:21 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:21 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:21 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:16 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-6.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475535**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 10:09 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73060 SDG#: PH195-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.72 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 0.9 | U | 0.9 | 0.2 | 21.74 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-6.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475535**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 10:09 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73060 SDG#: PH195-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,500 | | 42.9 | 7.73 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.29 | U | 4.29 | 0.794 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.45 | | 4.29 | 0.751 | 1 |
| 06946 | Barium | 7440-39-3 | 103 | | 1.07 | 0.0354 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.03 | J | 1.07 | 0.0719 | 1 |
| 07914 | Boron | 7440-42-8 | 5.74 | J | 10.7 | 0.901 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.07 | U | 1.07 | 0.0815 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,390 | | 21.5 | 3.58 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.6 | | 3.22 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.57 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 7.20 | | 2.15 | 0.311 | 1 |
| 01654 | Iron | 7439-89-6 | 25,000 | | 42.9 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 5.70 | | 3.22 | 0.536 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.5 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,940 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 195 | | 1.07 | 0.0890 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.516 | J | 2.15 | 0.182 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.84 | | 2.15 | 0.139 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 126 | | 10.7 | 3.10 | 1 |
| 01662 | Potassium | 7440-09-7 | 1,950 | | 107 | 8.95 | 1 |
| 01667 | Sodium | 7440-23-5 | 118 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 3.29 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,410 | | 1.07 | 0.182 | 1 |
| 06971 | Vanadium | 7440-62-2 | 48.2 | | 1.07 | 0.139 | 1 |
| 06972 | Zinc | 7440-66-6 | 42.3 | | 4.29 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.65 | J | 5.36 | 0.901 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.313 | J | 0.429 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0418 | J | 0.215 | 0.0279 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.1 | | 0.429 | 0.0729 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.281 | | 0.215 | 0.0322 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-6.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475535**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 10:09 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73060 SDG#: PH195-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.313 | 0.0179 | 0.0107 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.9 C. | n.a. | 5.95 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 7.7 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-6.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475535**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 10:09 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73060 SDG#: PH195-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0781 JBQ | 1.07 | 0.0515 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0399 JBQ | 5.35 | 0.0317 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0855 JBQ | 5.35 | 0.0236 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0705 JBQ | 5.35 | 0.0236 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0816 JBQ | 5.35 | 0.0223 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.538 JB | 5.35 | 0.0268 | 1 |
| 11031 | OCDD | 3268-87-9 | 4.80 JB | 10.7 | 0.0201 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.07 U | 1.07 | 0.0467 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.108 JBQ | 5.35 | 0.0167 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0459 JBQ | 5.35 | 0.0172 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0382 JBQ | 5.35 | 0.0238 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0850 JBQ | 5.35 | 0.0194 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0950 JBQ | 5.35 | 0.0280 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0681 JBQ | 5.35 | 0.0216 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.178 JBQ | 5.35 | 0.0110 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0847 JBQ | 5.35 | 0.0213 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.573 JB | 10.7 | 0.0324 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00699 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 85 | 25 - 164 |
| 13C12-12378-PeCDD | 96 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 90 | 28 - 130 |
| 13C12-123789-HxCDD | 92 | 28 - 130 |
| 13C12-1234678-HpCDD | 90 | 23 - 140 |
| 13C12-OCDD | 86 | 17 - 157 |
| 13C12-2378-TCDF | 89 | 24 - 169 |
| 13C12-12378-PeCDF | 106 | 24 - 185 |
| 13C12-23478-PeCDF | 95 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 117 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 56 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-6.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475535**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 10:09 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73060 SDG#: PH195-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-6.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475535**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 10:09 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73060 SDG#: PH195-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 03:21 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/29/2014 20:04 | Marie D Beamenderfer | 21.74 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:50 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:50 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 09:04 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 18:22 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 18:42 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 12:05 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-730-SA5A-TR-6.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475535**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 10:09 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73060 SDG#: PH195-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:14 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:14 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:24 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:23 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:23 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:23 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:23 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:18 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475536**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 12:14 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.85 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.77 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.4 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.4 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | J | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.8 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.75 | J | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.70 | J | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.77 | J | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.99 | J | 1.7 | 0.69 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 7.3 | J | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475536**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 12:14 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 10 | U | 10 | 4.1 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 10 | U | 10 | 4.1 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 29 | | 10 | 4.1 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 87 | | 21 | 8.3 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 10 | U | 10 | 4.1 | 2 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 15 | | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 37 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,700 | | 40.1 | 7.23 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.01 | U | 4.01 | 0.742 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.34 | J | 4.01 | 0.702 | 1 |
| 06946 | Barium | 7440-39-3 | 98.6 | | 1.00 | 0.0331 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.725 | J | 1.00 | 0.0672 | 1 |
| 07914 | Boron | 7440-42-8 | 6.50 | J | 10.0 | 0.842 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.264 | J | 1.00 | 0.0762 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,540 | | 20.1 | 3.35 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.3 | | 3.01 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.96 | | 1.00 | 0.0993 | 1 |
| 06953 | Copper | 7440-50-8 | 8.86 | | 2.01 | 0.291 | 1 |
| 01654 | Iron | 7439-89-6 | 22,200 | | 40.1 | 3.63 | 1 |
| 06955 | Lead | 7439-92-1 | 6.81 | | 3.01 | 0.501 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.0 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,120 | | 10.0 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 298 | | 1.00 | 0.0832 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.347 | J | 2.01 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.9 | | 2.01 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 302 | | 10.0 | 2.90 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,120 | | 100 | 8.36 | 1 |
| 01667 | Sodium | 7440-23-5 | 146 | | 100 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.85 | J | 10.0 | 0.221 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 1.00 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.2 | | 1.00 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 210 | | 4.01 | 0.201 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.89 | J | 5.01 | 0.842 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.219 | J | 0.401 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0415 | J | 0.201 | 0.0261 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.6 | | 0.401 | 0.0682 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.260 | | 0.201 | 0.0301 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0161 | J | 0.0169 | 0.0101 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475536**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 12:14 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.5 C. | n.a. | 7.79 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 3.2 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475536**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 12:14 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0660 JBQ | 1.00 | 0.0590 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.229 JB | 5.02 | 0.0449 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.105 JBQ | 5.02 | 0.0432 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.431 JB | 5.02 | 0.0445 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.488 JBQ | 5.02 | 0.0423 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.39 B | 5.02 | 0.0563 | 1 |
| 11031 | OCDD | 3268-87-9 | 115 B | 10.0 | 0.0536 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0843 JBQ | 1.00 | 0.0591 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.350 JB | 5.02 | 0.0284 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.330 JB | 5.02 | 0.0257 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.147 JB | 5.02 | 0.0350 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.198 JB | 5.02 | 0.0332 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.311 JBQ | 5.02 | 0.0356 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.198 JB | 5.02 | 0.0343 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.03 JB | 5.02 | 0.0276 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.230 JB | 5.02 | 0.0338 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.24 JB | 10.0 | 0.0572 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.567 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 93 | 25 - 164 |
| 13C12-12378-PeCDD | 98 | 25 - 181 |
| 13C12-123478-HxCDD | 90 | 32 - 141 |
| 13C12-123678-HxCDD | 91 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 69 | 17 - 157 |
| 13C12-2378-TCDF | 100 | 24 - 169 |
| 13C12-12378-PeCDF | 96 | 24 - 185 |
| 13C12-23478-PeCDF | 98 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 82 | 28 - 143 |
| 13C12-1234789-HpCDF | 78 | 26 - 138 |
| 13C12-OCDF | 64 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475536**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 12:14 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475536**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 12:14 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 09:14 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 09:22 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 21:07 | Heather E Williams | 2 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/31/2014 01:53 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 17:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:26 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:26 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:35 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475536**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 12:14 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

73005 SDG#: PH195-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:30 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:30 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:30 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:30 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:20 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475537**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.74 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.32 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475537**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,600 | | 43.2 | 7.79 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.32 | U | 4.32 | 0.799 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.32 | | 4.32 | 0.756 | 1 |
| 06946 | Barium | 7440-39-3 | 94.0 | | 1.08 | 0.0356 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.836 | J | 1.08 | 0.0724 | 1 |
| 07914 | Boron | 7440-42-8 | 6.66 | J | 10.8 | 0.907 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.193 | J | 1.08 | 0.0821 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,560 | | 21.6 | 3.61 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.0 | | 3.24 | 0.173 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.69 | | 1.08 | 0.107 | 1 |
| 06953 | Copper | 7440-50-8 | 7.98 | | 2.16 | 0.313 | 1 |
| 01654 | Iron | 7439-89-6 | 22,900 | | 43.2 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 5.45 | | 3.24 | 0.540 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.3 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,210 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 261 | | 1.08 | 0.0896 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.599 | J | 2.16 | 0.184 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.7 | | 2.16 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 226 | | 10.8 | 3.12 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,190 | | 108 | 9.01 | 1 |
| 01667 | Sodium | 7440-23-5 | 147 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.03 | J | 10.8 | 0.238 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,140 | | 1.08 | 0.184 | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.9 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 45.8 | | 4.32 | 0.216 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.42 | J | 5.40 | 0.907 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.209 | J | 0.432 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0419 | J | 0.216 | 0.0281 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.4 | | 0.432 | 0.0734 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.242 | | 0.216 | 0.0324 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475537**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0123 J | 0.0182 | 0.0109 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.1 C. | n.a. | 7.72 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 10.1 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475537**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.08 | U | 1.08 | 0.0382 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0362 | JB | 5.40 | 0.0296 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0783 | JBQ | 5.40 | 0.0369 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.420 | JBQ | 5.40 | 0.0388 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.203 | JBQ | 5.40 | 0.0360 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 17.4 | B | 5.40 | 0.0659 | 1 |
| 11031 | OCDD | 3268-87-9 | 301 | B | 10.8 | 0.0490 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.08 | U | 1.08 | 0.0411 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.179 | JBQ | 5.40 | 0.0189 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0773 | JBQ | 5.40 | 0.0200 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.397 | JBQ | 5.40 | 0.0462 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.255 | JB | 5.40 | 0.0374 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.298 | JB | 5.40 | 0.0499 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.331 | JB | 5.40 | 0.0427 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.75 | JB | 5.40 | 0.0184 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.592 | JB | 5.40 | 0.0376 | 1 |
| 11031 | OCDF | 39001-02-0 | 8.04 | JB | 10.8 | 0.0492 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.435 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 87 | 25 - 164 |
| 13C12-12378-PeCDD | 91 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 90 | 24 - 169 |
| 13C12-12378-PeCDF | 102 | 24 - 185 |
| 13C12-23478-PeCDF | 90 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 79 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 103 | 28 - 143 |
| 13C12-1234789-HpCDF | 55 | 26 - 138 |
| 13C12-OCDF | 44 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475537**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475537**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 01:45 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/29/2014 21:57 | Marie D Beamenderfer | 22.32 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:52 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:53 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 09:41 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 18:44 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 19:04 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 08:18 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475537**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 21:46 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 21:46 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 08:57 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:07 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:07 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:07 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:07 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:22 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MS Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475538**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 41 | | 1.9 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 37 | | 1.9 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 39 | | 1.9 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 31 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 28 | | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 36 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 30 | | 1.9 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 36 | | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 36 | | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 33 | | 1.9 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 37 | | 1.9 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 34 | | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 30 | | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 37 | | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 36 | | 1.9 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 36 | | 1.9 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 1.9 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 36 | | 1.9 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 32 | | 1.9 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 37 | | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 37 | | 1.9 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 31 | | 1.9 | 0.74 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 8.3 | | 1.0 | 0.2 | 22.89 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 170 | | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 180 | | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MS Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475538**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.6 | J | 5.6 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 7.1 | | 5.6 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.6 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.1 | J | 5.6 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.0 | J | 5.6 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.2 | | 5.6 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 10 | | 5.6 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.1 | J | 5.6 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 24,900 | | 43.2 | 7.79 | 1 |
| 06944 | Antimony | 7440-36-0 | 41.8 | | 4.32 | 0.799 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.7 | | 4.32 | 0.756 | 1 |
| 06946 | Barium | 7440-39-3 | 316 | | 1.08 | 0.0356 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.37 | | 1.08 | 0.0724 | 1 |
| 07914 | Boron | 7440-42-8 | 218 | | 10.8 | 0.907 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.38 | | 1.08 | 0.0821 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,260 | | 21.6 | 3.61 | 1 |
| 06951 | Chromium | 7440-47-3 | 44.2 | | 3.24 | 0.173 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.7 | | 1.08 | 0.107 | 1 |
| 06953 | Copper | 7440-50-8 | 36.8 | | 2.16 | 0.313 | 1 |
| 01654 | Iron | 7439-89-6 | 23,600 | | 43.2 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 21.1 | | 3.24 | 0.540 | 1 |
| 01656 | Lithium | 7439-93-2 | 141 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,850 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 330 | | 1.08 | 0.0896 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 207 | | 2.16 | 0.184 | 1 |
| 06961 | Nickel | 7440-02-0 | 65.1 | | 2.16 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 339 | | 10.8 | 3.12 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,700 | | 108 | 9.01 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,280 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 402 | | 10.8 | 0.238 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,460 | | 1.08 | 0.184 | 1 |
| 06971 | Vanadium | 7440-62-2 | 98.8 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 99.6 | | 4.32 | 0.216 | 1 |
| 10146 | Zirconium | 7440-67-7 | 109 | | 5.40 | 0.907 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.42 | | 0.432 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 11.2 | | 0.216 | 0.0281 | 2 |
| 06144 | Strontium | 7440-24-6 | 32.4 | | 0.432 | 0.0734 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.675 | | 0.216 | 0.0324 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MS Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475538**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | mg/kg | mg/kg | mg/kg | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.175 | 0.0179 | 0.0107 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 10.1 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-587-SA5A-TR-5.5MS Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7475538**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 22.5 | B | 1.10 | 0.0632 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 111 | B | 5.50 | 0.0544 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 106 | B | 5.50 | 0.0448 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 105 | B | 5.50 | 0.0467 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 106 | B | 5.50 | 0.0442 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 105 | B | 5.50 | 0.0615 | 1 |
| 11031 | OCDD | 3268-87-9 | 265 | B | 11.0 | 0.0455 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 23.4 | B | 1.10 | 0.0634 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 106 | B | 5.50 | 0.0363 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 107 | B | 5.50 | 0.0365 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 102 | B | 5.50 | 0.0930 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 103 | B | 5.50 | 0.0766 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 100 | B | 5.50 | 0.0977 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 104 | B | 5.50 | 0.0846 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 99.5 | B | 5.50 | 0.0498 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 101 | B | 5.50 | 0.0870 | 1 |
| 11031 | OCDF | 39001-02-0 | 200 | B | 11.0 | 0.0474 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 87 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 80 | 24 - 169 |
| 13C12-12378-PeCDF | 95 | 24 - 185 |
| 13C12-23478-PeCDF | 89 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 84 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 57 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MS Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475538**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MS Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475538**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 02:17 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/29/2014 22:35 | Marie D Beamenderfer | 22.89 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:53 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:53 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 09:59 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 19:05 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 19:25 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 09:15 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MS Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475538**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 21:58 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 21:58 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:09 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 21:58 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:14 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:14 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:14 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:14 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:29 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-587-SA5A-TR-5.5MSD Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7475539**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 40 | | 1.9 | 0.74 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 37 | | 1.9 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 38 | | 1.9 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 31 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 34 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 28 | | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 30 | | 1.9 | 0.74 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 36 | | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 37 | | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 33 | | 1.9 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 38 | | 1.9 | 0.74 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 34 | | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 30 | | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 37 | | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 36 | | 1.9 | 0.74 | 1 |
| 12969 | Fluorene | 86-73-7 | 36 | | 1.9 | 0.74 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 34 | | 1.9 | 0.74 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 37 | | 1.9 | 0.74 | 1 |
| 12969 | Naphthalene | 91-20-3 | 35 | | 1.9 | 0.74 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 32 | | 1.9 | 0.74 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 37 | | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 36 | | 1.9 | 0.74 | 1 |
| 12969 | Pyrene | 129-00-0 | 31 | | 1.9 | 0.74 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 10 | | 1.1 | 0.2 | 24.18 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 170 | | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 180 | | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MSD Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475539**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | | **SW-846 8015B modified** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.0 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 7.8 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 12 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.6 | J | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.5 | J | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.9 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 12 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 12 | | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.6 | J | 5.5 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 25,500 | | 43.2 | 7.79 | 1 |
| 06944 | Antimony | 7440-36-0 | 43.2 | | 4.32 | 0.799 | 1 |
| 06935 | Arsenic | 7440-38-2 | 20.9 | | 4.32 | 0.756 | 1 |
| 06946 | Barium | 7440-39-3 | 316 | | 1.08 | 0.0356 | 1 |
| 06947 | Beryllium | 7440-41-7 | 6.31 | | 1.08 | 0.0724 | 1 |
| 07914 | Boron | 7440-42-8 | 218 | | 10.8 | 0.907 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.48 | | 1.08 | 0.0821 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,390 | | 21.6 | 3.61 | 1 |
| 06951 | Chromium | 7440-47-3 | 46.7 | | 3.24 | 0.173 | 1 |
| 06952 | Cobalt | 7440-48-4 | 56.0 | | 1.08 | 0.107 | 1 |
| 06953 | Copper | 7440-50-8 | 45.0 | | 2.16 | 0.313 | 1 |
| 01654 | Iron | 7439-89-6 | 24,200 | | 43.2 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 23.1 | | 3.24 | 0.540 | 1 |
| 01656 | Lithium | 7439-93-2 | 139 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,020 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 333 | | 1.08 | 0.0896 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 206 | | 2.16 | 0.184 | 1 |
| 06961 | Nickel | 7440-02-0 | 64.5 | | 2.16 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 398 | | 10.8 | 3.12 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,570 | | 108 | 9.01 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,240 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 397 | | 10.8 | 0.238 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,570 | | 1.08 | 0.184 | 1 |
| 06971 | Vanadium | 7440-62-2 | 102 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 123 | | 4.32 | 0.216 | 1 |
| 10146 | Zirconium | 7440-67-7 | 109 | | 5.40 | 0.907 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.41 | | 0.432 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 11.1 | | 0.216 | 0.0281 | 2 |
| 06144 | Strontium | 7440-24-6 | 31.5 | | 0.432 | 0.0734 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.690 | | 0.216 | 0.0324 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MSD Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475539**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | mg/kg | mg/kg | mg/kg | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.179 | 0.0181 | 0.0109 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 10.1 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-587-SA5A-TR-5.5MSD Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7475539**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 22.4 | B | 1.09 | 0.0601 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 110 | B | 5.44 | 0.0499 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 103 | B | 5.44 | 0.0425 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 106 | B | 5.44 | 0.0468 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 105 | B | 5.44 | 0.0432 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 109 | B | 5.44 | 0.0607 | 1 |
| 11031 | OCDD | 3268-87-9 | 291 | B | 10.9 | 0.0371 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 22.8 | B | 1.09 | 0.0569 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 104 | B | 5.44 | 0.0350 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 107 | B | 5.44 | 0.0380 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 102 | B | 5.44 | 0.0631 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 101 | B | 5.44 | 0.0549 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 101 | B | 5.44 | 0.0727 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 103 | B | 5.44 | 0.0597 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 98.7 | B | 5.44 | 0.0359 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 101 | B | 5.44 | 0.0687 | 1 |
| 11031 | OCDF | 39001-02-0 | 202 | B | 10.9 | 0.0407 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 89 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 86 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 84 | 24 - 169 |
| 13C12-12378-PeCDF | 101 | 24 - 185 |
| 13C12-23478-PeCDF | 89 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 103 | 28 - 143 |
| 13C12-1234789-HpCDF | 61 | 26 - 138 |
| 13C12-OCDF | 53 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MSD Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475539**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MSD Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475539**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 02:49 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/29/2014 23:13 | Marie D Beamenderfer | 24.18 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:53 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:54 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 10:18 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 19:27 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 19:47 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 10:11 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5MSD Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475539**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:02 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:02 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:13 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:02 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:16 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:16 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:16 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:16 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:31 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-587-SA5A-TR-5.5DUP Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7475540**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,800 | | 43.2 | 7.79 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.32 | U | 4.32 | 0.799 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.60 | | 4.32 | 0.756 | 1 |
| 06946 | Barium | 7440-39-3 | 96.2 | | 1.08 | 0.0356 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.863 | J | 1.08 | 0.0724 | 1 |
| 07914 | Boron | 7440-42-8 | 6.99 | J | 10.8 | 0.907 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.140 | J | 1.08 | 0.0821 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,640 | | 21.6 | 3.61 | 1 |
| 06951 | Chromium | 7440-47-3 | 20.2 | | 3.24 | 0.173 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.63 | | 1.08 | 0.107 | 1 |
| 06953 | Copper | 7440-50-8 | 8.32 | | 2.16 | 0.313 | 1 |
| 01654 | Iron | 7439-89-6 | 22,300 | | 43.2 | 3.91 | 1 |
| 06955 | Lead | 7439-92-1 | 5.86 | | 3.24 | 0.540 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.3 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,350 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 303 | | 1.08 | 0.0896 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.428 | J | 2.16 | 0.184 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.0 | | 2.16 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 236 | | 10.8 | 3.12 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,260 | | 108 | 9.01 | 1 |
| 01667 | Sodium | 7440-23-5 | 154 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.17 | J | 10.8 | 0.238 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,140 | | 1.08 | 0.184 | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.1 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 46.5 | | 4.32 | 0.216 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.34 | J | 5.40 | 0.907 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.205 | J | 0.432 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0410 | J | 0.216 | 0.0281 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.5 | | 0.432 | 0.0734 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.237 | | 0.216 | 0.0324 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0117 | J | 0.0182 | 0.0109 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.74 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 10.1 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 9.8 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-587-SA5A-TR-5.5DUP Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475540**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:03 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58755 SDG#: PH195-05DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 21:54 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 21:54 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:05 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:12 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:12 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:12 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:12 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:26 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-887-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475541**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:08 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88755 SDG#: PH195-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.37 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.75 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.75 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 23.9 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: SL-887-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475541**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:08 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88755 SDG#: PH195-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 22,000 | | 43.6 | 7.87 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.36 | U | 4.36 | 0.807 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.26 | | 4.36 | 0.764 | 1 |
| 06946 | Barium | 7440-39-3 | 98.0 | | 1.09 | 0.0360 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.948 | J | 1.09 | 0.0731 | 1 |
| 07914 | Boron | 7440-42-8 | 6.87 | J | 10.9 | 0.916 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.262 | J | 1.09 | 0.0829 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,810 | | 21.8 | 3.64 | 1 |
| 06951 | Chromium | 7440-47-3 | 23.0 | | 3.27 | 0.175 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.60 | | 1.09 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 9.48 | | 2.18 | 0.316 | 1 |
| 01654 | Iron | 7439-89-6 | 23,500 | | 43.6 | 3.95 | 1 |
| 06955 | Lead | 7439-92-1 | 6.55 | | 3.27 | 0.545 | 1 |
| 01656 | Lithium | 7439-93-2 | 28.1 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,300 | | 10.9 | 1.82 | 1 |
| 06958 | Manganese | 7439-96-5 | 228 | | 1.09 | 0.0905 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.472 | J | 2.18 | 0.185 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.7 | | 2.18 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 258 | | 10.9 | 3.15 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,240 | | 109 | 9.10 | 1 |
| 01667 | Sodium | 7440-23-5 | 159 | | 109 | 18.2 | 1 |
| 06969 | Tin | 7440-31-5 | 3.08 | J | 10.9 | 0.240 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 1.09 | 0.185 | 1 |
| 06971 | Vanadium | 7440-62-2 | 44.1 | | 1.09 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 46.4 | | 4.36 | 0.218 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.28 | J | 5.45 | 0.916 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.238 | J | 0.436 | 0.109 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0434 | J | 0.218 | 0.0284 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.9 | | 0.436 | 0.0742 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.240 | | 0.218 | 0.0327 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-887-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475541**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:08 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88755 SDG#: PH195-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0230 | 0.0180 | 0.0108 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.9 C. | n.a. | 7.55 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 11.0 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-887-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475541**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:08 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88755 SDG#: PH195-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.11 | U | 1.11 | 0.0681 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0544 | JBQ | 5.53 | 0.0476 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0729 | JBQ | 5.53 | 0.0493 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.341 | JBQ | 5.53 | 0.0522 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.245 | JBQ | 5.53 | 0.0493 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 10.3 | B | 5.53 | 0.0704 | 1 |
| 11031 | OCDD | 3268-87-9 | 175 | B | 11.1 | 0.0807 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.11 | U | 1.11 | 0.0586 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.198 | JB | 5.53 | 0.0272 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.104 | JB | 5.53 | 0.0287 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.197 | JBQ | 5.53 | 0.0466 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.249 | JBQ | 5.53 | 0.0405 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.286 | JB | 5.53 | 0.0555 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.251 | JB | 5.53 | 0.0433 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.45 | JB | 5.53 | 0.0235 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.400 | JB | 5.53 | 0.0479 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.35 | JB | 11.1 | 0.107 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.276 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 71 | 25 - 164 |
| 13C12-12378-PeCDD | 83 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 71 | 24 - 169 |
| 13C12-12378-PeCDF | 86 | 24 - 185 |
| 13C12-23478-PeCDF | 80 | 21 - 178 |
| 13C12-123478-HxCDF | 70 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 64 | 29 - 147 |
| 13C12-1234678-HpCDF | 97 | 28 - 143 |
| 13C12-1234789-HpCDF | 53 | 26 - 138 |
| 13C12-OCDF | 41 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-887-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475541**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:08 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88755 SDG#: PH195-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-887-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475541**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:08 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88755 SDG#: PH195-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 03:53 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/29/2014 20:42 | Marie D Beamenderfer | 23.9 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:49 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:49 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 10:36 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 22:42 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 20:08 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 18:55 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-887-SA5A-TR-5.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7475541**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:08 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

88755 SDG#: PH195-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:30 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:30 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:39 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:33 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:33 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:33 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:33 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:33 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Acenaphthene | 83-32-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.10 | J | 1.0 | 0.051 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.097 | J | 1.0 | 0.051 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.097 | J | 1.0 | 0.051 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.051 | U | 0.051 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Fluorene | 86-73-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Morpholine | 110-91-8 | 20 | U | 20 | 20 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.051 | U | 0.051 | 0.030 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.051 | U | 0.051 | 0.030 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.051 | U | 0.051 | 0.010 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
1-methylnaphthalene

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.093 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.50 | U | 0.50 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.50 | U | 0.50 | 0.10 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.150 | J | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.00090 | J | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 | U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 | U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 | U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 | U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 | U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 | U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 | U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 | U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 | U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.0108 | J | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 | U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 | U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.00046 | J | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 | U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 | U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 7.2 | | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.91 | U | 1.91 | 0.255 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.56 | U | 9.56 | 0.232 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.56 | U | 9.56 | 0.186 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.56 | U | 9.56 | 0.195 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.56 | U | 9.56 | 0.177 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.865 | JBQ | 9.56 | 0.199 | 1 |
| 10915 | OCDD | 3268-87-9 | 9.68 | JBQ | 19.1 | 0.445 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 0.203 | JQ | 1.91 | 0.178 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.289 | JBQ | 9.56 | 0.127 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 9.56 | U | 9.56 | 0.117 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 9.56 | U | 9.56 | 0.113 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 9.56 | U | 9.56 | 0.105 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 9.56 | U | 9.56 | 0.121 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.192 | JBQ | 9.56 | 0.101 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.177 | JBQ | 9.56 | 0.0723 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.106 | JBQ | 9.56 | 0.0909 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.11 | JBQ | 19.1 | 0.269 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | U | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 88 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 91 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 94 | 28 - 130 |
| 13C12-1234678-HpCDD | 94 | 23 - 140 |
| 13C12-OCDD | 78 | 17 - 157 |
| 13C12-2378-TCDF | 88 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 89 | 26 - 152 |
| 13C12-123678-HxCDF | 92 | 26 - 123 |
| 13C12-234678-HxCDF | 93 | 28 - 136 |
| 13C12-123789-HxCDF | 90 | 29 - 147 |
| 13C12-1234678-HpCDF | 92 | 28 - 143 |
| 13C12-1234789-HpCDF | 86 | 26 - 138 |
| 13C12-OCDF | 81 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 | 14:12 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 | 14:12 | Sarah A Guill | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14144WAN026 | 06/03/2014 | 08:57 | Brian K Graham | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14144WAN026 | 05/27/2014 | 10:30 | Anna E Stager | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/30/2014 | 00:11 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/30/2014 | 00:11 | Miranda P Tillinghast | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141480020A | 05/29/2014 | 18:06 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141480020A | 05/28/2014 | 21:30 | Karen L Beyer | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440025A | 05/28/2014 | 00:03 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141440024A | 05/28/2014 | 11:57 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141440024A | 05/27/2014 | 08:00 | Kerrie A Freeburn | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141440025A | 05/27/2014 | 08:00 | Kerrie A Freeburn | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14148001 | 05/31/2014 | 10:40 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14148001 | 05/28/2014 | 10:15 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 | 19:06 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB3-052214 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7475542**
**LL Group # 1476783**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:45 by RE

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB322 SDG#: PH195-07EB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01767 | Sodium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:06 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:06 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:06 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:06 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:06 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:06 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141480639002B | 05/29/2014 22:47 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:47 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:47 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:47 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141475713004 | 05/29/2014 08:32 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141480635002 | 05/29/2014 10:10 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141480639002 | 05/29/2014 09:22 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141475713004 | 05/28/2014 09:00 | James L Mertz | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14144002101A | 05/24/2014 11:19 | Kenneth A Bell | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: Y141471AA | Sample number(s): 7475542 | | | | | | | | |
| Acetone | 20 U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |
| Chloroethane | 5 U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14144WAN026 | Sample number(s): 7475542 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 107 | 83-119 | 6 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 101 | 81-130 | 6 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 103 | 83-125 | 7 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 100 | 79-122 | 6 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 94 | 100 | 80-121 | 6 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 108 | 79-136 | 6 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 103 | 67-118 | 7 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 91 | 97 | 72-132 | 7 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 100 | 81-131 | 5 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 90 | 96 | 40-138 | 7 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 100 | 100 | 64-141 | 0 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 97 | 101 | 84-118 | 4 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 81 | 89 | 66-133 | 10 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 96 | 103 | 64-137 | 6 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 94 | 100 | 23-139 | 7 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.056 | J | 1.0 | 0.050 | ug/l | 160* | 72 | 70-143 | 77* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 89 | 94 | 84-124 | 6 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 90 | 96 | 82-119 | 6 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 85 | 93 | 68-132 | 8 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 84* | 89 | 86-130 | 5 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 83 | 87 | 81-131 | 5 | 30 |
| Morpholine | 20 | U | 20. | 20 | ug/l | | | | | |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 88 | 93 | 82-122 | 5 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 62 | 68 | 56-96 | 9 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 59 | 63 | 57-145 | 6 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 92 | 98 | 83-116 | 6 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 107 | 78-125 | 7 | 30 |
| Batch number: 14155SLA026 | Sample number(s): 7475534-7475539,7475541 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 80* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 84 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 85 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 80-119 | | |
| Batch number: 14147C16A | Sample number(s): 7475535,7475537-7475539,7475541 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 70 | | 67-120 | | |
| Batch number: 14149A94A | Sample number(s): 7475533,7475542 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 96 | 95 | 80-133 | 1 | 30 |
| Batch number: 141440035A | Sample number(s): 7475534-7475539,7475541 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 94 | 92 | 36-106 | 2 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 106 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 113 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141480020A | Sample number(s): 7475542 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 76 | 69 | 34-115 | 10 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 99 | 99 | 60-117 | 0 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 106 | 106 | 67-128 | 0 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141440024A | Sample number(s): 7475542 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 75 | 74 | 67-109 | 2 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 80 | 80 | 71-119 | 0 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 80 | 80 | 75-117 | 0 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 79 | 78 | 44-134 | 2 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 58 | 56 | 55-86 | 3 | 30 |
| Batch number: 141440025A | Sample number(s): 7475542 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 85 | 85 | 67-109 | 0 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 91 | 71-119 | 1 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 94 | 75-117 | 4 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 82 | 84 | 44-134 | 3 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 71 | 70 | 55-86 | 1 | 30 |
| Batch number: 141470033A | Sample number(s): 7475534-7475539,7475541 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 87 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 78 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 60-115 | | |
| Batch number: 141470034A | Sample number(s): 7475534-7475539,7475541 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 80 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 62 | | 60-115 | | |
| Batch number: 141475713004 | Sample number(s): 7475542 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006 0 | mg/l | 105 | 97 | 90-115 | 8 | 20 |
| Batch number: 141480635002 | Sample number(s): 7475542 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 105 | 105 | 90-112 | 0 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 97 | 96 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 105 | 105 | 90-113 | 0 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 107 | 104 | 90-110 | 3 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 102 | 100 | 90-111 | 2 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 98 | 97 | 90-110 | 1 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 107 | 106 | 90-112 | 2 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 105 | 103 | 90-112 | 2 | 20 |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | 0.0300 U | 0.0300 | 0.0016 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 U | 0.0100 | 0.0013 | mg/l | 108 | 107 | 90-110 | 1 | 20 |
| Copper | 0.0200 U | 0.0200 | 0.0027 | mg/l | 107 | 106 | 90-112 | 1 | 20 |
| Iron | 0.400 U | 0.400 | 0.0430 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0047 | mg/l | 110 | 108 | 88-116 | 2 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0047 | mg/l | 106 | 104 | 90-110 | 1 | 20 |
| Magnesium | 0.200 U | 0.200 | 0.0167 | mg/l | 104 | 102 | 89-110 | 1 | 20 |
| Manganese | 0.0100 U | 0.0100 | 0.00083 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0017 | mg/l | 105 | 104 | 90-110 | 1 | 20 |
| Nickel | 0.0200 U | 0.0200 | 0.0015 | mg/l | 111 | 109 | 90-111 | 2 | 20 |
| Phosphorus | 0.200 U | 0.200 | 0.0418 | mg/l | 103 | 103 | 90-110 | 1 | 20 |
| Potassium | 1.00 U | 1.00 | 0.0980 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 102 | 101 | 87-114 | 1 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0029 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 106 | 104 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0020 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Zinc | 0.0400 U | 0.0400 | 0.0020 | mg/l | 105 | 103 | 90-110 | 2 | 20 |
| Zirconium | 0.0110 J | 0.100 | 0.0084 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| | | | | | | | | | |
| Batch number: 141480638002 | Sample number(s): 7475534-7475541 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 85 | | 85-120 | | |
| | | | | | | | | | |
| Batch number: 141480639002A | Sample number(s): 7475542 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 112 | 104 | 90-115 | 8 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 106 | 103 | 90-110 | 3 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 108 | 100 | 90-115 | 7 | 20 |
| | | | | | | | | | |
| Batch number: 141480639002B | Sample number(s): 7475542 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 103 | 100 | 90-114 | 3 | 20 |
| | | | | | | | | | |
| Batch number: 141490637001 | Sample number(s): 7475534-7475541 | | | | | | | | |
| Aluminum | 7.59 J | 40.0 | 7.21 | mg/kg | 108 | | 80-120 | | |
| Antimony | 4.00 U | 4.00 | 0.740 | mg/kg | 109 | | 80-120 | | |
| Arsenic | 4.00 U | 4.00 | 0.700 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 0.0890 J | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 1.60 J | 10.0 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Cadmium | 1.00 U | 1.00 | 0.0760 | mg/kg | 103 | | 80-120 | | |
| Calcium | 21.3 | 20.0 | 3.34 | mg/kg | 107 | | 80-120 | | |
| Chromium | 3.00 U | 3.00 | 0.160 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 U | 1.00 | 0.0990 | mg/kg | 104 | | 80-120 | | |
| Copper | 2.00 U | 2.00 | 0.290 | mg/kg | 104 | | 80-120 | | |
| Iron | 40.0 U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 U | 3.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 U | 4.0 | 0.34 | mg/kg | 102 | | 80-120 | | |
| Magnesium | 10.0 U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 U | 10.0 | 2.89 | mg/kg | 103 | | 80-120 | | |
| Potassium | 100 U | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.59 J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 102 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141490637001A | Sample number(s): 7475534-7475541 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 103 | | 80-120 | | |
| Strontium | 0.103 | J | 0.400 | 0.0680 | mg/kg | 102 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141490637001B | Sample number(s): 7475534-7475541 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 14144002101A | Sample number(s): 7475542 | | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 100 | | 90-110 | | |
| Batch number: 14144039401A | Sample number(s): 7475534-7475537,7475540-7475541 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14148162401C | Sample number(s): 7475534-7475541 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14148001 | Sample number(s): 7475542 | | | | | | | | | |
| 2378-TCDD | 2.00 | U | 2.00 | 0.283 | pg/l | 99 | | 60-150 | | |
| 12378-PeCDD | 10.0 | U | 10.0 | 0.243 | pg/l | 97 | | 60-150 | | |
| 123478-HxCDD | 0.213 | J | 10.0 | 0.136 | pg/l | 97 | | 60-150 | | |
| 123678-HxCDD | 0.251 | J | 10.0 | 0.140 | pg/l | 95 | | 60-150 | | |
| 123789-HxCDD | 0.159 | J | 10.0 | 0.128 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDD | 0.923 | J | 10.0 | 0.166 | pg/l | 95 | | 60-150 | | |
| OCDD | 7.17 | J | 20.0 | 0.260 | pg/l | 95 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.184 | pg/l | 96 | | 60-150 | | |
| 12378-PeCDF | 0.603 | J | 10.0 | 0.115 | pg/l | 96 | | 60-150 | | |
| 23478-PeCDF | 10.0 | U | 10.0 | 0.111 | pg/l | 98 | | 60-150 | | |
| 123478-HxCDF | 0.316 | J | 10.0 | 0.103 | pg/l | 101 | | 60-150 | | |
| 123678-HxCDF | 10.0 | U | 10.0 | 0.0917 | pg/l | 99 | | 60-150 | | |
| 123789-HxCDF | 10.0 | U | 10.0 | 0.0931 | pg/l | 99 | | 60-150 | | |
| 234678-HxCDF | 0.178 | J | 10.0 | 0.0905 | pg/l | 97 | | 60-150 | | |
| 1234678-HpCDF | 0.283 | J | 10.0 | 0.0667 | pg/l | 98 | | 60-150 | | |
| 1234789-HpCDF | 0.365 | J | 10.0 | 0.0848 | pg/l | 97 | | 60-150 | | |
| OCDF | 0.452 | J | 20.0 | 0.187 | pg/l | 96 | | 60-150 | | |
| Batch number: 14153005 | Sample number(s): 7475534-7475539,7475541 | | | | | | | | | |
| 2378-TCDD | 0.0448 | J | 1.00 | 0.0438 | ng/kg | 105 | | 67-158 | | |
| 12378-PeCDD | 0.0540 | J | 5.00 | 0.0302 | ng/kg | 98 | | 70-142 | | |
| 123478-HxCDD | 0.0830 | J | 5.00 | 0.0221 | ng/kg | 94 | | 70-164 | | |
| 123678-HxCDD | 0.0643 | J | 5.00 | 0.0226 | ng/kg | 95 | | 76-134 | | |
| 123789-HxCDD | 0.0684 | J | 5.00 | 0.0211 | ng/kg | 93 | | 64-162 | | |
| 1234678-HpCDD | 0.0893 | J | 5.00 | 0.0218 | ng/kg | 92 | | 70-140 | | |
| OCDD | 0.452 | J | 10.0 | 0.0279 | ng/kg | 88 | | 78-144 | | |
| 2378-TCDF | 0.0491 | J | 1.00 | 0.0294 | ng/kg | 104 | | 75-158 | | |
| 12378-PeCDF | 0.103 | J | 5.00 | 0.0131 | ng/kg | 95 | | 80-134 | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 23478-PeCDF | 0.105 J | 5.00 | 0.0135 | ng/kg | 96 | | 68-160 | | |
| 123478-HxCDF | 0.0629 J | 5.00 | 0.0176 | ng/kg | 93 | | 72-134 | | |
| 123678-HxCDF | 0.0439 J | 5.00 | 0.0167 | ng/kg | 93 | | 84-130 | | |
| 123789-HxCDF | 0.0800 J | 5.00 | 0.0195 | ng/kg | 92 | | 78-130 | | |
| 234678-HxCDF | 0.0522 J | 5.00 | 0.0168 | ng/kg | 94 | | 70-156 | | |
| 1234678-HpCDF | 0.0727 J | 5.00 | 0.00876 | ng/kg | 91 | | 82-122 | | |
| 1234789-HpCDF | 0.0705 J | 5.00 | 0.0145 | ng/kg | 92 | | 78-138 | | |
| OCDF | 0.182 J | 10.0 | 0.0366 | ng/kg | 89 | | 63-170 | | |
| Batch number: 14148001 | Sample number(s): 7475542 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0648 | | | pg/l | | | | | |
| Batch number: 14153005 | Sample number(s): 7475534-7475539,7475541 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0529 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155SLA026 | Sample number(s): 7475534-7475539,7475541 UNSPK: 7475537 | | | | | | | | |
| Acenaphthene | 109 | 109 | 48-127 | 1 | 30 | | | | |
| Acenaphthylene | 101 | 101 | 60-128 | 0 | 30 | | | | |
| Anthracene | 105 | 102 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 94 | 94 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 84 | 84 | 49-137 | 0 | 30 | | | | |
| Benzo(b)fluoranthene | 94 | 93 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 76 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 96 | 95 | 33-141 | 1 | 30 | | | | |
| Benzo(k)fluoranthene | 81 | 81 | 49-144 | 0 | 30 | | | | |
| Butylbenzylphthalate | 98 | 97 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 98 | 99 | 52-147 | 0 | 30 | | | | |
| Chrysene | 89 | 89 | 43-141 | 0 | 30 | | | | |
| Dibenz(a,h)anthracene | 101 | 102 | 25-145 | 0 | 30 | | | | |
| Diethylphthalate | 90 | 91 | 66-140 | 0 | 30 | | | | |
| Dimethylphthalate | 82 | 80 | 70-123 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 99 | 48-164 | 2 | 30 | | | | |
| Fluoranthene | 96 | 96 | 38-153 | 0 | 30 | | | | |
| Fluorene | 97 | 96 | 57-130 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 96 | 95 | 26-139 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 94 | 93 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 99 | 99 | 46-147 | 0 | 30 | | | | |
| Naphthalene | 96 | 94 | 52-136 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 86 | 87 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 100 | 100 | 52-162 | 0 | 30 | | | | |
| Phenanthrene | 99 | 97 | 50-137 | 2 | 30 | | | | |
| Pyrene | 83 | 83 | 26-143 | 0 | 30 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14147C16A | Sample number(s): 7475535,7475537-7475539,7475541 UNSPK: 7475537 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 74 | 87 | 69-123 | 21 | 30 | | | | |
| Batch number: 141440035A | Sample number(s): 7475534-7475539,7475541 UNSPK: 7475537 | | | | | | | | |
| PCB-1016 | 92 | 95 | 41-135 | 3 | 50 | | | | |
| PCB-1260 | 96 | 99 | 40-134 | 3 | 50 | | | | |
| Batch number: 141470033A | Sample number(s): 7475534-7475539,7475541 UNSPK: 7475537 | | | | | | | | |
| EFH (C12-C14) | 82 | 91 | 49-123 | 9 | 20 | | | | |
| EFH (C15-C20) | 85 | 95 | 49-123 | 9 | 20 | | | | |
| EFH (C21-C30) | 86 | 96 | 49-123 | 10 | 20 | | | | |
| EFH (C30-C40) | 69 | 74 | 49-123 | 6 | 20 | | | | |
| EFH (C8-C11) | 73 | 83 | 49-123 | 12 | 20 | | | | |
| Batch number: 141470034A | Sample number(s): 7475534-7475539,7475541 UNSPK: 7475537 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 72 | 81 | 49-123 | 11 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 74 | 83 | 49-123 | 10 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 75 | 84 | 49-123 | 10 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 68 | 75 | 49-123 | 8 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 56 | 65 | 49-123 | 15 | 20 | | | | |
| Batch number: 141480638002 | Sample number(s): 7475534-7475541 UNSPK: 7475537 BKG: 7475537 | | | | | | | | |
| 3a Mercury 7471A | 91 | 92 | 65-135 | 2 | 20 | 0.0111 J | 0.0105 J | 6 (1) | 20 |
| Batch number: 141490637001 | Sample number(s): 7475534-7475541 UNSPK: 7475537 BKG: 7475537 | | | | | | | | |
| Aluminum | 2418 (2) | 2734 (2) | 75-125 | 3 | 20 | 17,700 | 17,800 | 1 | 20 |
| Antimony | 77 | 80 | 75-125 | 3 | 20 | 3.88 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 101 | 103 | 75-125 | 1 | 20 | 3.89 | 4.13 | 6 (1) | 20 |
| Barium | 103 | 103 | 75-125 | 0 | 20 | 84.5 | 86.5 | 2 | 20 |
| Beryllium | 102 | 101 | 75-125 | 1 | 20 | 0.751 J | 0.776 J | 3 (1) | 20 |
| Boron | 98 | 98 | 75-125 | 0 | 20 | 5.99 J | 6.29 J | 5 (1) | 20 |
| Cadmium | 96 | 98 | 75-125 | 2 | 20 | 0.174 J | 0.126 J | 32* (1) | 20 |
| Calcium | 163 (2) | 192 (2) | 75-125 | 4 | 20 | 2,300 | 2,380 | 3 | 20 |
| Chromium | 112 | 124 | 75-125 | 6 | 20 | 17.9 | 18.2 | 1 | 20 |
| Cobalt | 96 | 95 | 75-125 | 1 | 20 | 4.22 | 8.65 | 69* (1) | 20 |
| Copper | 107 | 137* | 75-125 | 20 | 20 | 7.17 | 7.48 | 4 (1) | 20 |
| Iron | 672 (2) | 1158 (2) | 75-125 | 2 | 20 | 20,600 | 20,000 | 3 | 20 |
| Lead | 97 | 109 | 75-125 | 9 | 20 | 4.90 | 5.26 | 7 (1) | 20 |
| Lithium | 106 | 104 | 75-125 | 2 | 20 | 23.7 | 23.7 | 0 | 20 |
| Magnesium | 299 (2) | 377 (2) | 75-125 | 3 | 20 | 3,780 | 3,910 | 3 | 20 |
| Manganese | 129 (2) | 134 (2) | 75-125 | 1 | 20 | 234 | 273 | 15 | 20 |
| Molybdenum | 96 | 95 | 75-125 | 1 | 20 | 0.539 J | 0.384 J | 33* (1) | 20 |
| Nickel | 101 | 100 | 75-125 | 1 | 20 | 9.62 | 9.91 | 3 (1) | 20 |
| Phosphorus | 104 | 159* | 75-125 | 16 | 20 | 203 | 212 | 4 | 20 |
| Potassium | 139* | 128* | 75-125 | 3 | 20 | 1,970 | 2,030 | 3 | 20 |
| Sodium | 105 | 101 | 75-125 | 4 | 20 | 132 | 138 | 5 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 1 | 20 | 2.72 J | 2.85 J | 5 (1) | 20 |
| Titanium | 297 (2) | 399 (2) | 75-125 | 7 | 20 | 1,020 | 1,030 | 0 | 20 |
| Vanadium | 109 | 114 | 75-125 | 3 | 20 | 35.9 | 36.1 | 1 | 20 |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Zinc | 100 | 142* | 75-125 | 21* | 20 | 41.2 | 41.8 | 1 | 20 |
| Zirconium | 97 | 97 | 75-125 | 0 | 20 | 3.97 J | 4.80 J | 19 (1) | 20 |
| Batch number: 141490637001A | Sample number(s): 7475534-7475541 UNSPK: 7475537 BKG: 7475537 | | | | | | | | |
| Silver | 103 | 103 | 75-125 | 1 | 20 | 0.0377 J | 0.0369 J | 2 (1) | 20 |
| Strontium | 128* | 118 | 75-125 | 3 | 20 | 19.2 | 19.4 | 1 | 20 |
| Thallium | 100 | 104 | 75-125 | 2 | 20 | 0.217 | 0.213 | 2 (1) | 20 |
| Batch number: 141490637001B | Sample number(s): 7475534-7475541 UNSPK: 7475537 BKG: 7475537 | | | | | | | | |
| Selenium | 102 | 102 | 75-125 | 0 | 20 | 0.188 J | 0.184 J | 2 (1) | 20 |
| Batch number: 14144002101A | Sample number(s): 7475542 BKG: P474548 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 7.2 | 7.2 | 0 | 3 |
| Batch number: 14144039401A | Sample number(s): 7475534-7475537,7475540-7475541 BKG: 7475537 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.72 | 7.74 | 0 | 3 |
| Batch number: 14148162401C | Sample number(s): 7475534-7475541 BKG: 7475537 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 10.1 | 9.8 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 10.1 | 9.8 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 10.1 | 9.8 | 3 | 20 |
| Batch number: 14153005 | Sample number(s): 7475534-7475539,7475541 UNSPK: 7475537 | | | | | | | | |
| 2378-TCDD | 102 | 103 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 101 | 101 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 96 | 95 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 95 | 97 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 96 | 96 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 80 | 84 | 40-135 | 4 | 20 | | | | |
| OCDD | -15* | -4* | 40-135 | 9 | 20 | | | | |
| 2378-TCDF | 106 | 105 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDF | 96 | 95 | 40-135 | 3 | 20 | | | | |
| 23478-PeCDF | 97 | 98 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDF | 92 | 94 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 94 | 93 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 91 | 93 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 94 | 94 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 87 | 87 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 91 | 92 | 40-135 | 0 | 20 | | | | |
| OCDF | 87 | 89 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

## Surrogate Quality Control

| | | | | |
|---|---|---|---|---|
| 7475542 | 102 | 103 | 98 | 95 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14144WAN026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7475542 | 91 | 103 | 82 |
| Blank | 80 | 92 | 72 |
| LCS | 92 | 106 | 84 |
| LCSD | 98 | 114 | 89 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14155SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7475534 | 99 | 107 | 90 |
| 7475535 | 92 | 109 | 89 |
| 7475536 | 106 | 113 | 90 |
| 7475537 | 93 | 108 | 86 |
| 7475538 | 98 | 114 | 91 |
| 7475539 | 98 | 114 | 92 |
| 7475541 | 99 | 112 | 93 |
| Blank | 106 | 122* | 93 |
| LCS | 107 | 123* | 94 |
| MS | 98 | 114 | 91 |
| MSD | 98 | 114 | 92 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14147C16A

| | Trifluorotoluene-F |
|---|---|
| 7475535 | 87 |
| 7475537 | 86 |
| 7475538 | 83 |
| 7475539 | 83 |
| 7475541 | 89 |
| Blank | 90 |
| LCS | 86 |
| MS | 83 |
| MSD | 83 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

## Surrogate Quality Control

Batch number: 14149A94A

| | Trifluorotoluene-F |
|---|---|
| 7475533 | 80 |
| 7475542 | 79 |
| Blank | 82 |
| LCS | 91 |
| LCSD | 90 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141440035A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7475534 | 85 | 92 |
| 7475535 | 100 | 103 |
| 7475536 | 93 | 97 |
| 7475537 | 99 | 103 |
| 7475538 | 100 | 105 |
| 7475539 | 101 | 107 |
| 7475541 | 96 | 102 |
| Blank | 112 | 116 |
| LCS | 118 | 128* |
| LCSD | 107 | 114 |
| MS | 100 | 105 |
| MSD | 101 | 107 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141480020A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7475542 | 112 | 106 |
| Blank | 120 | 97 |
| LCS | 114 | 88 |
| LCSD | 114 | 86 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141440024A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7475542 | 65 | 73 |
| Blank | 82 | 91 |
| LCS | 68 | 74 |
| LCSD | 66 | 74 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141440025A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7475542 | 71 | 79 |
| Blank | 73 | 85 |
| LCS | 72 | 84 |
| LCSD | 72 | 84 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141470033A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7475534 | 84 | 86 |
| 7475535 | 74 | 79 |
| 7475536 | 84 | 83 |
| 7475537 | 75 | 80 |
| 7475538 | 72 | 83 |
| 7475539 | 80 | 90 |
| 7475541 | 76 | 82 |
| Blank | 79 | 90 |
| LCS | 75 | 88 |
| MS | 72 | 83 |
| MSD | 80 | 90 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141470034A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7475534 | 63 | 82 |
| 7475535 | 74 | 75 |
| 7475536 | 72 | 81 |
| 7475537 | 74 | 76 |
| 7475538 | 68 | 75 |
| 7475539 | 77 | 83 |
| 7475541 | 86 | 89 |
| Blank | 67 | 80 |
| LCS | 77 | 88 |
| MS | 68 | 75 |
| MSD | 77 | 83 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14148001

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7475542 | 88 | 76 | 91 | 88 | 94 | 94 |
| Blank | 81 | 82 | 85 | 85 | 89 | 86 |
| OPR | 83 | 87 | 90 | 90 | 88 | 91 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7475542 | 78 | 88 | 82 | 79 | 89 | 92 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Blank | 73 | 79 | 83 | 81 | 81 | 84 |
| OPR | 87 | 83 | 88 | 88 | 87 | 90 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7475542 | 93 | 90 | 92 | 86 | 81 | |
| Blank | 84 | 91 | 86 | 80 | 71 | |
| OPR | 89 | 93 | 92 | 86 | 80 | |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14153005

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7475534 | 85 | 93 | 84 | 87 | 90 | 83 |
| 7475535 | 85 | 96 | 86 | 90 | 92 | 90 |
| 7475536 | 93 | 98 | 90 | 91 | 91 | 83 |
| 7475537 | 87 | 91 | 83 | 85 | 86 | 77 |
| 7475538 | 77 | 87 | 82 | 85 | 85 | 82 |
| 7475539 | 82 | 89 | 84 | 83 | 86 | 81 |
| 7475541 | 71 | 83 | 81 | 86 | 85 | 77 |
| Blank | 91 | 95 | 90 | 91 | 92 | 82 |
| MS | 77 | 87 | 82 | 85 | 85 | 82 |
| MSD | 82 | 89 | 84 | 83 | 86 | 81 |
| OPR | 76 | 83 | 79 | 77 | 80 | 70 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |
| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
| 7475534 | 77 | 95 | 102 | 96 | 79 | 87 |
| 7475535 | 86 | 89 | 106 | 95 | 75 | 90 |
| 7475536 | 69 | 100 | 96 | 98 | 83 | 83 |
| 7475537 | 67 | 90 | 102 | 90 | 75 | 88 |
| 7475538 | 76 | 80 | 95 | 89 | 74 | 84 |
| 7475539 | 76 | 84 | 101 | 89 | 74 | 86 |
| 7475541 | 65 | 71 | 86 | 80 | 70 | 81 |
| Blank | 69 | 97 | 103 | 98 | 84 | 91 |
| MS | 76 | 80 | 95 | 89 | 74 | 84 |
| MSD | 76 | 84 | 101 | 89 | 74 | 86 |
| OPR | 60 | 82 | 90 | 84 | 72 | 79 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7475534 | 82 | 79 | 96 | 71 | 61 | |
| 7475535 | 80 | 72 | 117 | 65 | 56 | |
| 7475536 | 85 | 87 | 82 | 78 | 64 | |
| 7475537 | 79 | 72 | 103 | 55 | 44 | |
| 7475538 | 78 | 75 | 99 | 65 | 57 | |
| 7475539 | 77 | 75 | 103 | 61 | 53 | |
| 7475541 | 74 | 64 | 97 | 53 | 41 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476783
Reported: 06/09/14 at 01:54 PM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| Blank | 86 | 83 | 99 | 67 | 55 |
| MS | 78 | 75 | 99 | 65 | 57 |
| MSD | 77 | 75 | 103 | 61 | 53 |
| OPR | 75 | 72 | 86 | 58 | 47 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/22/2014
CarrierName: FedEx
AirbillNo: 770073250078

A-13013
G-1476783
S-74755533-42

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140522-04
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB3-052214 | 5/22/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-730-SA5A-TR-0.5 | 5/22/14 09:56 | SO | None | 2 - 16 oz glass | 10 day | X | | X | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | |
| SL-730-SA5A-TR-6.0 | 5/22/14 10:09 | SO | None | 2 - 16 oz glass | 10 day | X | | X | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | |
| SL-730-SA5A-TR-6.0 | 5/22/14 10:09 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-587-SA5A-TR-0.5 | 5/22/14 12:14 | SO | None | 2 - 16 oz glass | 10 day | X | | X | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | |
| SL-587-SA5A-TR-5.5MS | 5/22/14 13:03 | SO | None | 6 - 16 oz glass | 10 day | X | | X | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | MS/MSD |
| SL-587-SA5A-TR-5.5MS | 5/22/14 13:03 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | MS/MSD |
| SL-887-SA5A-TR-5.5 | 5/22/14 13:08 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-887-SA5A-TR-5.5 | 5/22/14 13:08 | SO | None | 2 - 16 oz glass | 10 day | X | | X | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Rob Ellen

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 5/22/14 | 16000 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | 5/23/14 | 950 | |

Trenching

# SSFL Phase 3 Chain of Custody

**CDM Smith**

A-13013
G-1476783
S-7475533-42

DateShipped: 5/22/2014
CarrierName: FedEx
AirbillNo: 770073250078

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140522-05
Cooler #: 4
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB3-052214 | 5/22/14 15:45 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB3-052214 | 5/22/14 15:45 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB3-052214 | 5/22/14 15:45 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB3-052214 | 5/22/14 15:45 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| EB3-052214 | 5/22/14 15:45 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB3-052214 | 5/22/14 15:45 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| EB3-052214 | 5/22/14 15:45 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB3-052214 | 5/22/14 15:45 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | Morpholine Only |
| EB3-052214 | 5/22/14 15:45 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott Myers | 05/22/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Trenching

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15429

Group Number(s): 1476783

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/23/2014 9:50 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:58 on 05/23/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.6 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.0 | DT | Wet | Y | Bagged | N | N |
| 3 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/23/2014
Group Number: 1476822
SDG: PH196
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| EB1-052214 Water | 7475817 |
| EB2-052214 Water | 7475818 |
| TB1-052214 Water | 7475819 |
| FDG2-SL-628-SA8-SB-0.0-0.5 Soil | 7475820 |
| FDG2-SL-628-SA8-SB-4.0-5.0 Soil | 7475821 |
| FDG2-SL-628-SA8-SB-9.0-10.0 Soil | 7475822 |
| FDG2-SL-628-SA8-SB-14.0-15.0 Soil | 7475823 |
| FDG2-SL-578-NBZ-SB-0.0-0.5 Soil | 7475824 |
| FDG2-SL-581-NBZ-SB-0.0-0.5 Soil | 7475825 |
| FDG2-SL-581-NBZ-SB-4.0-5.0 Soil | 7475826 |
| FDG2-SL-581-NBZ-SB-9.0-10.0 Soil | 7475827 |
| FDG2-SL-581-NBZ-SB-13.0-14.0 Soil | 7475828 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: EB1-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475817**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:00 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB122 SDG#: PH196-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 0.6 | J | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

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EB122 SDG#: PH196-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 7 | | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.090 | J | 1.0 | 0.051 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.053 | J | 1.0 | 0.051 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.20 | J | 1.0 | 0.051 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.051 | U | 0.051 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

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EB122 SDG#: PH196-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | |
| 12971 | Fluorene | 86-73-7 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.020 | J | 0.051 | 0.010 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.030 | J | 0.051 | 0.010 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.11 | | 0.051 | 0.031 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.051 | U | 0.051 | 0.010 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.051 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.051 | U | 0.051 | 0.031 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.051 | U | 0.051 | 0.010 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
1-methylnaphthalene

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.093 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.50 | U | 0.50 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.50 | U | 0.50 | 0.10 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |

The reverse surrogate, capric acid, is present at <1%.

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**SSFL Phase 3 Subarea 8/NBZ**

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EB122 SDG#: PH196-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.0109 J | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.4 | 0.010 | 0.010 | 1 |
| | The sample was analyzed outside of the project required holding time of 48 hours. | | | | | |

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## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA
The temperature of the temperature blank bottle(s) upon receipt at the lab was 15.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 13.3-16.3 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 14:33 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 14:33 | Sarah A Guill | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14144WAN026 | 06/03/2014 09:26 | Brian K Graham | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14144WAN026 | 05/27/2014 10:30 | Anna E Stager | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/30/2014 00:37 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/30/2014 00:37 | Miranda P Tillinghast | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141480020A | 05/29/2014 18:24 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141480020A | 05/28/2014 21:30 | Karen L Beyer | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440025A | 05/28/2014 00:25 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141440024A | 05/28/2014 12:18 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141440024A | 05/27/2014 08:00 | Kerrie A Freeburn | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141440025A | 05/27/2014 08:00 | Kerrie A Freeburn | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475817**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:00 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB122 SDG#: PH196-01EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07070 | Titanium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:10 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141480639002B | 05/29/2014 22:50 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:50 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:50 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:50 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141475713004 | 05/29/2014 08:34 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141480635002 | 05/29/2014 10:10 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141480639002 | 05/29/2014 09:22 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141475713004 | 05/28/2014 09:00 | James L Mertz | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14147002104A | 05/27/2014 22:21 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475818**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB222 SDG#: PH196-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.054 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.10 | J | 1.1 | 0.054 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 1.1 | U | 1.1 | 0.054 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.054 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.095 | J | 1.1 | 0.054 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.033 | J | 0.054 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.052 | J | 0.054 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.15 | | 0.054 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.054 | U | 0.054 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.054 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.054 | U | 0.054 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.054 | U | 0.054 | 0.011 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
1-methylnaphthalene

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is within the acceptance range allowed by the method, the data is reported.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Aldehydes & Ketones** | **SW-846 8315A** | | ug/l | | ug/l | ug/l | |
| 13022 | Formaldehyde | 50-00-0 | 50 | U | 50 | 30 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/l | | ug/l | ug/l | |
| 10589 | Aldrin | 309-00-2 | 0.0092 | U | 0.0092 | 0.0018 | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0092 | U | 0.0092 | 0.0028 | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0092 | U | 0.0092 | 0.0031 | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0092 | U | 0.0092 | 0.0018 | 1 |
| 10589 | Chlordane | 57-74-9 | 0.46 | U | 0.46 | 0.15 | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.018 | U | 0.018 | 0.0046 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475818**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB222 SDG#: PH196-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10589 | p,p-DDE | 72-55-9 | 0.018 | U | 0.018 | 0.0046 | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.018 | U | 0.018 | 0.0048 | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0092 | U | 0.0092 | 0.0031 | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.018 | U | 0.018 | 0.0049 | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0092 | U | 0.0092 | 0.0040 | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.018 | U | 0.018 | 0.014 | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.018 | U | 0.018 | 0.0053 | 1 |
| 10589 | Endrin | 72-20-8 | 0.018 | U | 0.018 | 0.0075 | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.092 | U | 0.092 | 0.018 | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.018 | U | 0.018 | 0.0046 | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0092 | U | 0.0092 | 0.0018 | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0092 | U | 0.0092 | 0.0021 | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.092 | U | 0.092 | 0.028 | 1 |
| 10589 | Mirex | 2385-85-5 | 0.046 | U | 0.046 | 0.0092 | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.92 | U | 0.92 | 0.28 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.093 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.085 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.14 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.50 | U | 0.50 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.50 | U | 0.50 | 0.10 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.10 | U | 0.10 | 0.050 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475818**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB222 SDG#: PH196-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 U | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.0108 J | 0.100 | 0.0084 | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.8 | 0.010 | 0.010 | 1 |
| | The sample was analyzed outside of the project required holding time of 48 hours. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475818**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB222 SDG#: PH196-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 0.235 | JBQ | 1.96 | 0.188 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.485 | JBQ | 9.78 | 0.172 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.438 | JB | 9.78 | 0.113 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 0.450 | JBQ | 9.78 | 0.120 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.78 | U | 9.78 | 0.118 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.709 | JBQ | 9.78 | 0.111 | 1 |
| 10915 | OCDD | 3268-87-9 | 3.50 | JB | 19.6 | 0.152 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 0.119 | JQ | 1.96 | 0.116 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.471 | JBQ | 9.78 | 0.0806 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.621 | JB | 9.78 | 0.0727 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.487 | JB | 9.78 | 0.0936 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.596 | JB | 9.78 | 0.0938 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.600 | JBQ | 9.78 | 0.0824 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.567 | JB | 9.78 | 0.0853 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.704 | JBQ | 9.78 | 0.0530 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.626 | JBQ | 9.78 | 0.0674 | 1 |
| 10915 | OCDF | 39001-02-0 | 1.75 | JB | 19.6 | 0.102 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.397 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 76 | 25 - 164 |
| 13C12-12378-PeCDD | 86 | 25 - 181 |
| 13C12-123478-HxCDD | 92 | 32 - 141 |
| 13C12-123678-HxCDD | 95 | 28 - 130 |
| 13C12-123789-HxCDD | 92 | 28 - 130 |
| 13C12-1234678-HpCDD | 94 | 23 - 140 |
| 13C12-OCDD | 84 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 87 | 24 - 185 |
| 13C12-23478-PeCDF | 88 | 21 - 178 |
| 13C12-123478-HxCDF | 91 | 26 - 152 |
| 13C12-123678-HxCDF | 92 | 26 - 123 |
| 13C12-234678-HxCDF | 93 | 28 - 136 |
| 13C12-123789-HxCDF | 107 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 89 | 26 - 138 |
| 13C12-OCDF | 85 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475818**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB222 SDG#: PH196-02EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475818**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB222 SDG#: PH196-02EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA
The temperature of the temperature blank bottle(s) upon receipt at the lab was 15.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 13.3-16.3 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14144WAN026 | 06/03/2014 09:55 | Brian K Graham | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14144WAN026 | 05/27/2014 10:30 | Anna E Stager | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/30/2014 01:03 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/30/2014 01:03 | Miranda P Tillinghast | 1 |
| 13022 | 19b Formaldehyde 8315A | SW-846 8315A | 1 | 141430009A | 05/25/2014 20:38 | James H Place | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 141470014A | 05/29/2014 08:01 | Lisa A Reinert | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141480020A | 05/29/2014 18:42 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141480020A | 05/28/2014 21:30 | Karen L Beyer | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 141470014A | 05/27/2014 16:00 | Seth A Farrier | 1 |
| 01013 | Formaldehyde Extraction | SW-846 8315A | 1 | 141430009A | 05/24/2014 12:30 | David V Hershey Jr | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141440025A | 05/28/2014 00:46 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141440024A | 05/28/2014 12:40 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141440024A | 05/27/2014 08:00 | Kerrie A Freeburn | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141440025A | 05/27/2014 08:00 | Kerrie A Freeburn | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153002 | 06/05/2014 05:29 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14153002 | 06/02/2014 10:35 | Brett M Weidman | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052214 Water**
**SSFL Phase 3 Subarea 8/NBZ**

**LL Sample # WW 7475818**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 15:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB222 SDG#: PH196-02EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01756 | Lithium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141480635002 | 05/29/2014 19:14 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141480639002B | 05/29/2014 22:52 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:52 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:52 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141480639002A | 05/29/2014 22:52 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141475713004 | 05/29/2014 08:40 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141480635002 | 05/29/2014 10:10 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141480639002 | 05/29/2014 09:22 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141475713004 | 05/28/2014 09:00 | James L Mertz | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14147002104A | 05/27/2014 21:59 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB1-052214 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7475819**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:00

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB122 SDG#: PH196-03TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/30/2014 01:28 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/30/2014 01:28 | Miranda P Tillinghast | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475820**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62800 SDG#: PH196-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.2 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 27 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 51 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.9 | J | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 5.5 | J | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.4 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 19:19 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 20:30 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475821**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62840 SDG#: PH196-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.77 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 15 | | 5.6 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 28 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.7 | J | 5.6 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 4.6 | J | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.3 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/29/2014 21:20 | Marie D Beamenderfer | 25.77 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:41 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:41 | Lisa J Cooke | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 19:41 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 20:52 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475822**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:52 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62890 SDG#: PH196-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | J | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 24.41 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475822**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:52 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62890 SDG#: PH196-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 21,900 | | 42.2 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.22 | U | 4.22 | 0.781 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.90 | | 4.22 | 0.739 | 1 |
| 06946 | Barium | 7440-39-3 | 88.8 | | 1.06 | 0.0348 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.959 | J | 1.06 | 0.0707 | 1 |
| 07914 | Boron | 7440-42-8 | 10.8 | | 10.6 | 0.887 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.339 | J | 1.06 | 0.0802 | 1 |
| 01650 | Calcium | 7440-70-2 | 18,800 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 28.9 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.68 | | 1.06 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 15.7 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 28,100 | | 42.2 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 7.92 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.1 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,390 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 400 | | 1.06 | 0.0876 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.334 | J | 2.11 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.2 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 341 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,800 | | 106 | 8.80 | 1 |
| 01667 | Sodium | 7440-23-5 | 112 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 2.99 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | | 1.06 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 53.6 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 67.3 | | 4.22 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.90 | J | 5.28 | 0.887 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.307 | J | 0.422 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0277 | J | 0.211 | 0.0274 | 2 |
| 06144 | Strontium | 7440-24-6 | 38.1 | | 0.422 | 0.0718 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.297 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475822**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:52 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62890 SDG#: PH196-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0176 U | 0.0176 | 0.0105 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.1 C. | n.a. | 7.98 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 6.2 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 04:25 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/30/2014 01:06 | Marie D Beamenderfer | 24.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:42 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:42 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 10:54 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 19:49 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 21:13 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475822**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 08:52 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62890 SDG#: PH196-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:34 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:34 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:43 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:34 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:35 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:35 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:35 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:35 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:39 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475823**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62814 SDG#: PH196-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 14 | J | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.3 | U | 1.3 | 0.3 | 29.62 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475823**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62814 SDG#: PH196-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.1 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.4 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,600 | | 41.3 | 7.45 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.13 | U | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 7.54 | | 4.13 | 0.723 | 1 |
| 06946 | Barium | 7440-39-3 | 81.4 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.857 | J | 1.03 | 0.0692 | 1 |
| 07914 | Boron | 7440-42-8 | 10.5 | | 10.3 | 0.868 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.367 | J | 1.03 | 0.0785 | 1 |
| 01650 | Calcium | 7440-70-2 | 17,000 | | 20.7 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 26.2 | | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.02 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 12.5 | | 2.07 | 0.300 | 1 |
| 01654 | Iron | 7439-89-6 | 26,200 | | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 7.02 | | 3.10 | 0.516 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.2 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,180 | | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 408 | | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.479 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.3 | | 2.07 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 398 | | 10.3 | 2.98 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,920 | | 103 | 8.61 | 1 |
| 01667 | Sodium | 7440-23-5 | 265 | | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 3.06 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | | 1.03 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 50.2 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 66.0 | | 4.13 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.15 | J | 5.16 | 0.868 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.273 | J | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0359 | J | 0.207 | 0.0269 | 2 |
| 06144 | Strontium | 7440-24-6 | 35.6 | | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.287 | | 0.207 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475823**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62814 SDG#: PH196-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0170 U | 0.0170 | 0.0102 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.2 C. | n.a. | 8.36 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 6.0 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 04:57 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/30/2014 01:44 | Marie D Beamenderfer | 29.62 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:43 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:43 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 11:13 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 18:57 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 21:34 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-628-SA8-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7475823**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 09:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62814 SDG#: PH196-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:38 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:38 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:47 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:37 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:37 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:37 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:37 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:41 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-578-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475824**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 11:26 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57800 SDG#: PH196-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.72 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-578-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7475824**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 11:26 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57800 SDG#: PH196-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 26,800 | | 42.1 | 7.59 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.21 | U | 4.21 | 0.779 | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.59 | | 4.21 | 0.737 | 1 |
| 06946 | Barium | 7440-39-3 | 112 | | 1.05 | 0.0347 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.38 | | 1.05 | 0.0706 | 1 |
| 07914 | Boron | 7440-42-8 | 7.46 | J | 10.5 | 0.885 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.100 | J | 1.05 | 0.0800 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,590 | | 21.1 | 3.52 | 1 |
| 06951 | Chromium | 7440-47-3 | 29.6 | | 3.16 | 0.168 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.92 | | 1.05 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 18.9 | | 2.11 | 0.305 | 1 |
| 01654 | Iron | 7439-89-6 | 36,900 | | 211 | 19.1 | 5 |
| 06955 | Lead | 7439-92-1 | 12.2 | | 3.16 | 0.527 | 1 |
| 01656 | Lithium | 7439-93-2 | 41.4 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 7,340 | | 10.5 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 239 | | 1.05 | 0.0874 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.544 | J | 2.11 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.8 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 184 | | 10.5 | 3.04 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,460 | | 105 | 8.78 | 1 |
| 01667 | Sodium | 7440-23-5 | 156 | | 105 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 4.40 | J | 10.5 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,230 | | 1.05 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 59.4 | | 1.05 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 88.5 | | 4.21 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.54 | J | 5.27 | 0.885 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.660 | | 0.421 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 0.211 | U | 0.211 | 0.0274 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.3 | | 0.421 | 0.0716 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.335 | | 0.211 | 0.0316 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0117 | J | 0.0174 | 0.0105 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-578-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475824**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 11:26 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57800 SDG#: PH196-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.2 C. | n.a. | 7.48 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 7.8 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 05:30 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 11:31 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 20:32 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 22:18 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:47 | Katlin N Cataldi | 5 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-578-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475824**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 11:26 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57800 SDG#: PH196-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:42 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:42 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:51 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:42 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/05/2014 07:20 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:40 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:40 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:40 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:43 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475825**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:10 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58100 SDG#: PH196-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.6 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 8.6 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 21 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 26,700 | | 41.0 | 7.39 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.10 | U | 4.10 | 0.759 | 1 |
| 06935 | Arsenic | 7440-38-2 | 11.7 | | 4.10 | 0.718 | 1 |
| 06946 | Barium | 7440-39-3 | 114 | | 1.03 | 0.0338 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.33 | | 1.03 | 0.0687 | 1 |
| 07914 | Boron | 7440-42-8 | 10.6 | | 10.3 | 0.861 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.166 | J | 1.03 | 0.0779 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,300 | | 20.5 | 3.42 | 1 |
| 06951 | Chromium | 7440-47-3 | 33.3 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 10.6 | | 1.03 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 21.9 | | 2.05 | 0.297 | 1 |
| 01654 | Iron | 7439-89-6 | 36,600 | | 205 | 18.6 | 5 |
| 06955 | Lead | 7439-92-1 | 12.0 | | 3.08 | 0.513 | 1 |
| 01656 | Lithium | 7439-93-2 | 45.0 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 8,620 | | 10.3 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 423 | | 1.03 | 0.0851 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.318 | J | 2.05 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 19.1 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 594 | | 10.3 | 2.96 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,900 | | 103 | 8.55 | 1 |
| 01667 | Sodium | 7440-23-5 | 119 | | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 4.04 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,680 | | 1.03 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 67.6 | | 1.03 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 99.0 | | 4.10 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 7.09 | | 5.13 | 0.861 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.606 | | 0.410 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.128 | J | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.8 | | 0.410 | 0.0697 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.425 | | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0122 | J | 0.0178 | 0.0107 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475825**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:10 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58100 SDG#: PH196-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.18 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 6.2 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 20:02 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 22:39 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:55 | Katlin N Cataldi | 5 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475825**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:10 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58100 SDG#: PH196-09

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:50 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:50 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:55 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:50 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:42 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:42 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:42 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:42 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:45 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401A | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475826**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58140 SDG#: PH196-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 24.22 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 30,600 | | 42.9 | 7.73 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.29 | U | 4.29 | 0.793 | 1 |
| 06935 | Arsenic | 7440-38-2 | 10.4 | | 4.29 | 0.750 | 1 |
| 06946 | Barium | 7440-39-3 | 137 | | 1.07 | 0.0354 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.50 | | 1.07 | 0.0718 | 1 |
| 07914 | Boron | 7440-42-8 | 10.5 | J | 10.7 | 0.900 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.261 | J | 1.07 | 0.0814 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,620 | | 21.4 | 3.58 | 1 |
| 06951 | Chromium | 7440-47-3 | 32.6 | | 3.21 | 0.171 | 1 |
| 06952 | Cobalt | 7440-48-4 | 12.9 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 21.1 | | 2.14 | 0.311 | 1 |
| 01654 | Iron | 7439-89-6 | 40,900 | | 214 | 19.4 | 5 |
| 06955 | Lead | 7439-92-1 | 14.3 | | 3.21 | 0.536 | 1 |
| 01656 | Lithium | 7439-93-2 | 40.4 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 8,320 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 475 | | 1.07 | 0.0889 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.437 | J | 2.14 | 0.182 | 1 |
| 06961 | Nickel | 7440-02-0 | 19.8 | | 2.14 | 0.139 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 447 | | 10.7 | 3.10 | 1 |
| 01662 | Potassium | 7440-09-7 | 5,260 | | 107 | 8.94 | 1 |
| 01667 | Sodium | 7440-23-5 | 289 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 4.40 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,540 | | 1.07 | 0.182 | 1 |
| 06971 | Vanadium | 7440-62-2 | 70.7 | | 1.07 | 0.139 | 1 |
| 06972 | Zinc | 7440-66-6 | 98.2 | | 4.29 | 0.214 | 1 |
| 10146 | Zirconium | 7440-67-7 | 6.94 | | 5.36 | 0.900 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.672 | | 0.429 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0997 | J | 0.214 | 0.0279 | 2 |
| 06144 | Strontium | 7440-24-6 | 29.2 | | 0.429 | 0.0729 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475826**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58140 SDG#: PH196-10

| CAT No. | Analysis Name | | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06145 | Thallium | | 7440-28-0 | 0.515 | 0.214 | 0.0321 | 2 |
| | | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | | 7439-97-6 | 0.0178 U | 0.0178 | 0.0107 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.4 C. | | n.a. | 6.56 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | n.a. | 9.4 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/30/2014 02:22 | Marie D Beamenderfer | 24.22 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:44 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:45 | Lisa J Cooke | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 20:54 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 23:01 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475826**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:20 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58140 SDG#: PH196-10

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:03 | Katlin N Cataldi | 5 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:58 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:58 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 09:58 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 22:58 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:44 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:44 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:44 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:44 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:47 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401B | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-581-NBZ-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7475827**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58190 SDG#: PH196-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.8 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.9 | U | 1.9 | 0.38 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.8 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.9 | U | 1.9 | 0.76 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.9 | U | 1.9 | 0.76 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 23.5 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 37 | U | 37 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 37 | U | 37 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.7 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.6 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.9 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.7 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.7 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475827**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58190 SDG#: PH196-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.5 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.5 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 29,400 | | 44.9 | 8.08 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.49 | U | 4.49 | 0.830 | 1 |
| 06935 | Arsenic | 7440-38-2 | 14.4 | | 4.49 | 0.785 | 1 |
| 06946 | Barium | 7440-39-3 | 164 | | 1.12 | 0.0370 | 1 |
| 06947 | Beryllium | 7440-41-7 | 2.19 | | 1.12 | 0.0751 | 1 |
| 07914 | Boron | 7440-42-8 | 11.4 | | 11.2 | 0.942 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.12 | U | 1.12 | 0.0852 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,990 | | 22.4 | 3.75 | 1 |
| 06951 | Chromium | 7440-47-3 | 37.7 | | 3.36 | 0.179 | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.35 | | 1.12 | 0.111 | 1 |
| 06953 | Copper | 7440-50-8 | 29.8 | | 2.24 | 0.325 | 1 |
| 01654 | Iron | 7439-89-6 | 60,400 | | 224 | 20.3 | 5 |
| 06955 | Lead | 7439-92-1 | 18.9 | | 3.36 | 0.561 | 1 |
| 01656 | Lithium | 7439-93-2 | 49.5 | | 4.5 | 0.38 | 1 |
| 01657 | Magnesium | 7439-95-4 | 9,500 | | 11.2 | 1.87 | 1 |
| 06958 | Manganese | 7439-96-5 | 335 | | 1.12 | 0.0931 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.457 | J | 2.24 | 0.191 | 1 |
| 06961 | Nickel | 7440-02-0 | 19.4 | | 2.24 | 0.146 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 714 | | 11.2 | 3.24 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,590 | | 112 | 9.35 | 1 |
| 01667 | Sodium | 7440-23-5 | 658 | | 112 | 18.7 | 1 |
| 06969 | Tin | 7440-31-5 | 4.60 | J | 11.2 | 0.247 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,560 | | 1.12 | 0.191 | 1 |
| 06971 | Vanadium | 7440-62-2 | 78.8 | | 1.12 | 0.146 | 1 |
| 06972 | Zinc | 7440-66-6 | 120 | | 4.49 | 0.224 | 1 |
| 10146 | Zirconium | 7440-67-7 | 8.27 | | 5.61 | 0.942 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.980 | | 0.449 | 0.112 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0426 | J | 0.224 | 0.0292 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.7 | | 0.449 | 0.0762 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.524 | | 0.224 | 0.0336 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475827**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58190 SDG#: PH196-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0182 U | 0.0182 | 0.0109 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 5.74 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 11.7 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 06:02 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/30/2014 03:00 | Marie D Beamenderfer | 23.5 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:46 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:46 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 11:50 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 21:15 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 23:22 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475827**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:30 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58190 SDG#: PH196-11

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:19 | Katlin N Cataldi | 5 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:14 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:14 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:02 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:14 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:46 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:46 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:46 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:46 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:49 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401B | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-581-NBZ-SB-13.0-14.0 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7475828**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:41 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

13581 SDG#: PH196-12*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.38 | J | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.72 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25.72 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-13.0-14.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475828**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:41 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

13581 SDG#: PH196-12*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | | **SW-846 8015B modified** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 28,100 | | 43.0 | 7.76 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.30 | U | 4.30 | 0.796 | 1 |
| 06935 | Arsenic | 7440-38-2 | 12.5 | | 4.30 | 0.753 | 1 |
| 06946 | Barium | 7440-39-3 | 140 | | 1.08 | 0.0355 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.63 | | 1.08 | 0.0721 | 1 |
| 07914 | Boron | 7440-42-8 | 10.9 | | 10.8 | 0.904 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.178 | J | 1.08 | 0.0818 | 1 |
| 01650 | Calcium | 7440-70-2 | 5,260 | | 21.5 | 3.59 | 1 |
| 06951 | Chromium | 7440-47-3 | 39.2 | | 3.23 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 12.9 | | 1.08 | 0.107 | 1 |
| 06953 | Copper | 7440-50-8 | 27.9 | | 2.15 | 0.312 | 1 |
| 01654 | Iron | 7439-89-6 | 42,100 | | 215 | 19.5 | 5 |
| 06955 | Lead | 7439-92-1 | 17.8 | | 3.23 | 0.538 | 1 |
| 01656 | Lithium | 7439-93-2 | 67.7 | | 4.3 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 11,000 | | 10.8 | 1.80 | 1 |
| 06958 | Manganese | 7439-96-5 | 487 | | 1.08 | 0.0893 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.320 | J | 2.15 | 0.183 | 1 |
| 06961 | Nickel | 7440-02-0 | 26.5 | | 2.15 | 0.140 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 776 | | 10.8 | 3.11 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,940 | | 108 | 8.98 | 1 |
| 01667 | Sodium | 7440-23-5 | 512 | | 108 | 18.0 | 1 |
| 06969 | Tin | 7440-31-5 | 4.54 | J | 10.8 | 0.237 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,710 | | 1.08 | 0.183 | 1 |
| 06971 | Vanadium | 7440-62-2 | 76.1 | | 1.08 | 0.140 | 1 |
| 06972 | Zinc | 7440-66-6 | 124 | | 4.30 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 9.28 | | 5.38 | 0.904 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.784 | | 0.430 | 0.108 | 2 |
| 06142 | Silver | 7440-22-4 | 0.191 | J | 0.215 | 0.0280 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.1 | | 0.430 | 0.0732 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.430 | | 0.215 | 0.0323 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-13.0-14.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475828**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:41 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

13581 SDG#: PH196-12*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0173 J | 0.0176 | 0.0106 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.5 C. | n.a. | 7.38 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 8.0 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 06:34 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/30/2014 03:37 | Marie D Beamenderfer | 25.72 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414334607 | 05/23/2014 19:47 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414334607 | 05/23/2014 19:47 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141440035A | 05/28/2014 12:09 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141440035A | 05/27/2014 06:30 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 21:37 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/30/2014 23:44 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-581-NBZ-SB-13.0-14.0 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7475828**
**LL Group # 1476822**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/22/2014 13:41 by RR

Submitted: 05/23/2014 09:50
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

13581 SDG#: PH196-12*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:27 | Katlin N Cataldi | 5 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:22 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:22 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:06 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:22 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:49 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:49 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:49 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:49 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:51 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039401B | 05/24/2014 10:00 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: Y141471AA | Sample number(s): 7475817 | | | | | | | | |
| Acetone | 20 U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |
| Chloroethane | 5 U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14144WAN026 | Sample number(s): 7475817-7475818 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 107 | 83-119 | 6 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 95 | 101 | 81-130 | 6 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 103 | 83-125 | 7 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 100 | 79-122 | 6 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 94 | 100 | 80-121 | 6 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 108 | 79-136 | 6 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 103 | 67-118 | 7 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 91 | 97 | 72-132 | 7 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 100 | 81-131 | 5 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 90 | 96 | 40-138 | 7 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 100 | 100 | 64-141 | 0 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 97 | 101 | 84-118 | 4 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 81 | 89 | 66-133 | 10 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 96 | 103 | 64-137 | 6 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 94 | 100 | 23-139 | 7 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.056 | J | 1.0 | 0.050 | ug/l | 160* | 72 | 70-143 | 77* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 89 | 94 | 84-124 | 6 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 90 | 96 | 82-119 | 6 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 85 | 93 | 68-132 | 8 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 84* | 89 | 86-130 | 5 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 83 | 87 | 81-131 | 5 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 88 | 93 | 82-122 | 5 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 62 | 68 | 56-96 | 9 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 59 | 63 | 57-145 | 6 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 92 | 98 | 83-116 | 6 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 107 | 78-125 | 7 | 30 |
| Batch number: 14155SLA026 | Sample number(s): 7475822-7475824,7475827-7475828 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 80* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 84 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 85 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 80-119 | | |
| Batch number: 14147C16A | Sample number(s): 7475821-7475823,7475826-7475828 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 70 | | 67-120 | | |
| Batch number: 14149A94A | Sample number(s): 7475817-7475819 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 96 | 95 | 80-133 | 1 | 30 |
| Batch number: 141430009A | Sample number(s): 7475818 | | | | | | | | | |
| Formaldehyde | 50 | U | 50. | 30 | ug/l | 98 | 100 | 67-117 | 2 | 30 |
| Batch number: 141440035A | Sample number(s): 7475822-7475824,7475827-7475828 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 94 | 92 | 36-106 | 2 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 106 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 113 | | 84-125 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141470014A | Sample number(s): 7475818 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 77 | 83 | 37-137 | 8 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 93 | 96 | 44-148 | 3 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 97 | 98 | 48-147 | 1 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 95 | 96 | 44-146 | 0 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 96 | 98 | 44-152 | 2 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 92 | 95 | 44-146 | 4 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 85 | 90 | 44-146 | 5 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 97 | 100 | 47-146 | 3 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 94 | 93 | 45-146 | 1 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 87 | 87 | 39-140 | 0 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 95 | 97 | 45-139 | 2 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 97 | 99 | 48-139 | 3 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 91 | 91 | 43-139 | 1 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 92 | 94 | 43-144 | 2 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 98 | 98 | 42-152 | 1 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 83 | 87 | 36-146 | 4 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 95 | 94 | 49-142 | 1 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 84 | 87 | 40-150 | 3 | 30 |
| Mirex | 0.040 | U | 0.040 | 0.0080 | ug/l | | | | | |
| Toxaphene | 0.80 | U | 0.80 | 0.24 | ug/l | | | | | |
| Batch number: 141480020A | Sample number(s): 7475817-7475818 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 76 | 69 | 34-115 | 10 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 99 | 99 | 60-117 | 0 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 106 | 106 | 67-128 | 0 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141440024A | Sample number(s): 7475817-7475818 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 75 | 74 | 67-109 | 2 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 80 | 80 | 71-119 | 0 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 80 | 80 | 75-117 | 0 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 79 | 78 | 44-134 | 2 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 58 | 56 | 55-86 | 3 | 30 |
| Batch number: 141440025A | Sample number(s): 7475817-7475818 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 85 | 85 | 67-109 | 0 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 91 | 71-119 | 1 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 90 | 94 | 75-117 | 4 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 82 | 84 | 44-134 | 3 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 71 | 70 | 55-86 | 1 | 30 |
| Batch number: 141470033A | Sample number(s): 7475820-7475828 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 87 | | 76-115 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 78 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 60-115 | | |
| Batch number: 141470034A | Sample number(s): 7475820-7475828 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 80 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 62 | | 60-115 | | |
| Batch number: 141475713004 | Sample number(s): 7475817-7475818 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006 0 | mg/l | 105 | 97 | 90-115 | 8 | 20 |
| Batch number: 141480635002 | Sample number(s): 7475817-7475818 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 105 | 105 | 90-112 | 0 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 97 | 96 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 105 | 105 | 90-113 | 0 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 107 | 104 | 90-110 | 3 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 102 | 100 | 90-111 | 2 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 98 | 97 | 90-110 | 1 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 107 | 106 | 90-112 | 2 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 108 | 107 | 90-110 | 1 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 107 | 106 | 90-112 | 1 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 105 | 103 | 90-112 | 2 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 110 | 108 | 88-116 | 2 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 106 | 104 | 90-110 | 1 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 104 | 102 | 89-110 | 1 | 20 |
| Manganese | 0.0100 | U | 0.0100 | 0.00083 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 105 | 104 | 90-110 | 1 | 20 |
| Nickel | 0.0200 | U | 0.0200 | 0.0015 | mg/l | 111 | 109 | 90-111 | 2 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0418 | mg/l | 103 | 103 | 90-110 | 1 | 20 |
| Potassium | 1.00 | U | 1.00 | 0.0980 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 102 | 101 | 87-114 | 1 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 102 | 101 | 90-110 | 1 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 106 | 104 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0020 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Zinc | 0.0400 | U | 0.0400 | 0.0020 | mg/l | 105 | 103 | 90-110 | 2 | 20 |
| Zirconium | 0.0110 | J | 0.100 | 0.0084 | mg/l | 104 | 103 | 90-110 | 1 | 20 |
| Batch number: 141480638002 | Sample number(s): 7475822-7475828 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 85 | | 85-120 | | |
| Batch number: 141480639002A | Sample number(s): 7475817-7475818 | | | | | | | | | |
| Silver | 0.0010 | U | 0.0010 | 0.00011 | mg/l | 112 | 104 | 90-115 | 8 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00034 | mg/l | 106 | 103 | 90-110 | 3 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 108 | 100 | 90-115 | 7 | 20 |
| Batch number: 141480639002B | Sample number(s): 7475817-7475818 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 103 | 100 | 90-114 | 3 | 20 |
| Batch number: 141490637001 | Sample number(s): 7475822-7475828 | | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 7.59 | J | 40.0 | 7.21 | mg/kg | 108 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 109 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 0.0890 | J | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 1.60 | J | 10.0 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 103 | | 80-120 | | |
| Calcium | 21.3 | | 20.0 | 3.34 | mg/kg | 107 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 104 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 104 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 102 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 103 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.59 | J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 102 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141490637001A | Sample number(s): 7475822-7475828 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 103 | | 80-120 | | |
| Strontium | 0.103 | J | 0.400 | 0.0680 | mg/kg | 102 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141490637001B | Sample number(s): 7475822-7475828 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 14144039401A | Sample number(s): 7475822-7475825 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14144039401B | Sample number(s): 7475826-7475828 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14147002104A | Sample number(s): 7475817-7475818 | | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 100 | | 90-110 | | |
| Batch number: 14148162402A | Sample number(s): 7475820-7475828 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14153002 | Sample number(s): 7475818 | | | | | | | | | |
| 2378-TCDD | 0.380 | J | 2.00 | 0.276 | pg/l | 93 | | 60-150 | | |
| 12378-PeCDD | 0.681 | J | 10.0 | 0.246 | pg/l | 93 | | 60-150 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 123478-HxCDD | 0.447 | J | 10.0 | 0.159 | pg/l | 94 | | 60-150 | | |
| 123678-HxCDD | 0.340 | J | 10.0 | 0.168 | pg/l | 92 | | 60-150 | | |
| 123789-HxCDD | 0.401 | J | 10.0 | 0.156 | pg/l | 94 | | 60-150 | | |
| 1234678-HpCDD | 1.48 | J | 10.0 | 0.146 | pg/l | 93 | | 60-150 | | |
| OCDD | 3.59 | J | 20.0 | 0.227 | pg/l | 89 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.170 | pg/l | 91 | | 60-150 | | |
| 12378-PeCDF | 0.578 | J | 10.0 | 0.107 | pg/l | 94 | | 60-150 | | |
| 23478-PeCDF | 0.774 | J | 10.0 | 0.101 | pg/l | 94 | | 60-150 | | |
| 123478-HxCDF | 0.904 | J | 10.0 | 0.136 | pg/l | 96 | | 60-150 | | |
| 123678-HxCDF | 0.611 | J | 10.0 | 0.124 | pg/l | 95 | | 60-150 | | |
| 123789-HxCDF | 0.782 | J | 10.0 | 0.118 | pg/l | 93 | | 60-150 | | |
| 234678-HxCDF | 0.441 | J | 10.0 | 0.114 | pg/l | 93 | | 60-150 | | |
| 1234678-HpCDF | 0.896 | J | 10.0 | 0.0864 | pg/l | 95 | | 60-150 | | |
| 1234789-HpCDF | 0.700 | J | 10.0 | 0.108 | pg/l | 94 | | 60-150 | | |
| OCDF | 2.01 | J | 20.0 | 0.174 | pg/l | 93 | | 60-150 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.162 | | | | pg/l | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155SLA026 | Sample number(s): 7475822-7475824,7475827-7475828 UNSPK: P475537 | | | | | | | | |
| Acenaphthene | 109 | 109 | 48-127 | 1 | 30 | | | | |
| Acenaphthylene | 101 | 101 | 60-128 | 0 | 30 | | | | |
| Anthracene | 105 | 102 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 94 | 94 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 84 | 84 | 49-137 | 0 | 30 | | | | |
| Benzo(b)fluoranthene | 94 | 93 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 76 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 96 | 95 | 33-141 | 1 | 30 | | | | |
| Benzo(k)fluoranthene | 81 | 81 | 49-144 | 0 | 30 | | | | |
| Butylbenzylphthalate | 98 | 97 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 98 | 99 | 52-147 | 0 | 30 | | | | |
| Chrysene | 89 | 89 | 43-141 | 0 | 30 | | | | |
| Dibenz(a,h)anthracene | 101 | 102 | 25-145 | 0 | 30 | | | | |
| Diethylphthalate | 90 | 91 | 66-140 | 0 | 30 | | | | |
| Dimethylphthalate | 82 | 80 | 70-123 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 99 | 48-164 | 2 | 30 | | | | |
| Fluoranthene | 96 | 96 | 38-153 | 0 | 30 | | | | |
| Fluorene | 97 | 96 | 57-130 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 96 | 95 | 26-139 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 94 | 93 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 99 | 99 | 46-147 | 0 | 30 | | | | |
| Naphthalene | 96 | 94 | 52-136 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 86 | 87 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 100 | 100 | 52-162 | 0 | 30 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene | 99 | 97 | 50-137 | 2 | 30 | | | | |
| Pyrene | 83 | 83 | 26-143 | 0 | 30 | | | | |
| Batch number: 14147C16A | Sample number(s): 7475821-7475823,7475826-7475828 UNSPK: P475537 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 74 | 87 | 69-123 | 21 | 30 | | | | |
| Batch number: 141440035A | Sample number(s): 7475822-7475824,7475827-7475828 UNSPK: P475537 | | | | | | | | |
| PCB-1016 | 92 | 95 | 41-135 | 3 | 50 | | | | |
| PCB-1260 | 96 | 99 | 40-134 | 3 | 50 | | | | |
| Batch number: 141470033A | Sample number(s): 7475820-7475828 UNSPK: P475537 | | | | | | | | |
| EFH (C12-C14) | 82 | 91 | 49-123 | 9 | 20 | | | | |
| EFH (C15-C20) | 85 | 95 | 49-123 | 9 | 20 | | | | |
| EFH (C21-C30) | 86 | 96 | 49-123 | 10 | 20 | | | | |
| EFH (C30-C40) | 69 | 74 | 49-123 | 6 | 20 | | | | |
| EFH (C8-C11) | 73 | 83 | 49-123 | 12 | 20 | | | | |
| Batch number: 141470034A | Sample number(s): 7475820-7475828 UNSPK: P475537 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 72 | 81 | 49-123 | 11 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 74 | 83 | 49-123 | 10 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 75 | 84 | 49-123 | 10 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 68 | 75 | 49-123 | 8 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 56 | 65 | 49-123 | 15 | 20 | | | | |
| Batch number: 141480638002 | Sample number(s): 7475822-7475828 UNSPK: P475537 BKG: P475537 | | | | | | | | |
| 3a Mercury 7471A | 91 | 92 | 65-135 | 2 | 20 | 0.0111 J | 0.0105 J | 6 (1) | 20 |
| Batch number: 141490637001 | Sample number(s): 7475822-7475828 UNSPK: P475537 BKG: P475537 | | | | | | | | |
| Aluminum | 2418 (2) | 2734 (2) | 75-125 | 3 | 20 | 17,700 | 17,800 | 1 | 20 |
| Antimony | 77 | 80 | 75-125 | 3 | 20 | 3.88 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 101 | 103 | 75-125 | 1 | 20 | 3.89 | 4.13 | 6 (1) | 20 |
| Barium | 103 | 103 | 75-125 | 0 | 20 | 84.5 | 86.5 | 2 | 20 |
| Beryllium | 102 | 101 | 75-125 | 1 | 20 | 0.751 J | 0.776 J | 3 (1) | 20 |
| Boron | 98 | 98 | 75-125 | 0 | 20 | 5.99 J | 6.29 J | 5 (1) | 20 |
| Cadmium | 96 | 98 | 75-125 | 2 | 20 | 0.174 J | 0.126 J | 32* (1) | 20 |
| Calcium | 163 (2) | 192 (2) | 75-125 | 4 | 20 | 2,300 | 2,380 | 3 | 20 |
| Chromium | 112 | 124 | 75-125 | 6 | 20 | 17.9 | 18.2 | 1 | 20 |
| Cobalt | 96 | 95 | 75-125 | 1 | 20 | 4.22 | 8.65 | 69* (1) | 20 |
| Copper | 107 | 137* | 75-125 | 20 | 20 | 7.17 | 7.48 | 4 (1) | 20 |
| Iron | 672 (2) | 1158 (2) | 75-125 | 2 | 20 | 20,600 | 20,000 | 3 | 20 |
| Lead | 97 | 109 | 75-125 | 9 | 20 | 4.90 | 5.26 | 7 (1) | 20 |
| Lithium | 106 | 104 | 75-125 | 2 | 20 | 23.7 | 23.7 | 0 | 20 |
| Magnesium | 299 (2) | 377 (2) | 75-125 | 3 | 20 | 3,780 | 3,910 | 3 | 20 |
| Manganese | 129 (2) | 134 (2) | 75-125 | 1 | 20 | 234 | 273 | 15 | 20 |
| Molybdenum | 96 | 95 | 75-125 | 1 | 20 | 0.539 J | 0.384 J | 33* (1) | 20 |
| Nickel | 101 | 100 | 75-125 | 1 | 20 | 9.62 | 9.91 | 3 (1) | 20 |
| Phosphorus | 104 | 159* | 75-125 | 16 | 20 | 203 | 212 | 4 | 20 |
| Potassium | 139* | 128* | 75-125 | 3 | 20 | 1,970 | 2,030 | 3 | 20 |
| Sodium | 105 | 101 | 75-125 | 4 | 20 | 132 | 138 | 5 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 1 | 20 | 2.72 J | 2.85 J | 5 (1) | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Titanium | 297 (2) | 399 (2) | 75-125 | 7 | 20 | 1,020 | 1,030 | 0 | 20 |
| Vanadium | 109 | 114 | 75-125 | 3 | 20 | 35.9 | 36.1 | 1 | 20 |
| Zinc | 100 | 142* | 75-125 | 21* | 20 | 41.2 | 41.8 | 1 | 20 |
| Zirconium | 97 | 97 | 75-125 | 0 | 20 | 3.97 J | 4.80 J | 19 (1) | 20 |
| Batch number: 141490637001A | Sample number(s): 7475822-7475828 UNSPK: P475537 BKG: P475537 | | | | | | | | |
| Silver | 103 | 103 | 75-125 | 1 | 20 | 0.0377 J | 0.0369 J | 2 (1) | 20 |
| Strontium | 128* | 118 | 75-125 | 3 | 20 | 19.2 | 19.4 | 1 | 20 |
| Thallium | 100 | 104 | 75-125 | 2 | 20 | 0.217 | 0.213 | 2 (1) | 20 |
| Batch number: 141490637001B | Sample number(s): 7475822-7475828 UNSPK: P475537 BKG: P475537 | | | | | | | | |
| Selenium | 102 | 102 | 75-125 | 0 | 20 | 0.188 J | 0.184 J | 2 (1) | 20 |
| Batch number: 14144039401A | Sample number(s): 7475822-7475825 BKG: P475537 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.72 | 7.74 | 0 | 3 |
| Batch number: 14144039401B | Sample number(s): 7475826-7475828 BKG: 7475828 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.38 | 7.37 | 0 | 3 |
| Batch number: 14147002104A | Sample number(s): 7475817-7475818 BKG: P476649 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 7.6 | 7.7 | 1 | 3 |
| Batch number: 14148162402A | Sample number(s): 7475820-7475828 BKG: 7475826 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 9.4 | 8.9 | 6 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7475817 | 102 | 101 | 98 | 95 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14144WAN026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7475817 | 90 | 102 | 77 |
| 7475818 | 91 | 105 | 82 |
| Blank | 80 | 92 | 72 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| LCS | 92 | 106 | 84 |
| LCSD | 98 | 114 | 89 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14155SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7475822 | 91 | 107 | 86 |
| 7475823 | 95 | 114 | 88 |
| 7475824 | 90 | 110 | 85 |
| 7475827 | 90 | 105 | 84 |
| 7475828 | 101 | 114 | 89 |
| Blank | 106 | 122* | 93 |
| LCS | 107 | 123* | 94 |
| MS | 98 | 114 | 91 |
| MSD | 98 | 114 | 92 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14147C16A

| | Trifluorotoluene-F |
|---|---|
| 7475821 | 79 |
| 7475822 | 83 |
| 7475823 | 81 |
| 7475826 | 88 |
| 7475827 | 83 |
| 7475828 | 87 |
| Blank | 90 |
| LCS | 86 |
| MS | 83 |
| MSD | 83 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14149A94A

| | Trifluorotoluene-F |
|---|---|
| 7475817 | 83 |
| 7475818 | 90 |
| 7475819 | 79 |
| Blank | 82 |
| LCS | 91 |
| LCSD | 90 |
| Limits: | 63-135 |

Analysis Name: 19b Formaldehyde 8315A
Batch number: 141430009A

| | Butyraldehyde |
|---|---|

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7475818 | 90 | |
| Blank | 93 | |
| LCS | 95 | |
| LCSD | 101 | |
| Limits: | 36-155 | |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141440035A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7475822 | 97 | 105 |
| 7475823 | 99 | 107 |
| 7475824 | 101 | 105 |
| 7475827 | 103 | 110 |
| 7475828 | 106 | 110 |
| Blank | 112 | 116 |
| LCS | 118 | 128* |
| LCSD | 107 | 114 |
| MS | 100 | 105 |
| MSD | 101 | 107 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 141470014A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7475818 | 90 | 87 |
| Blank | 71 | 89 |
| LCS | 90 | 92 |
| LCSD | 89 | 94 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141480020A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7475817 | 115 | 95 |
| 7475818 | 107 | 54 |
| Blank | 120 | 97 |
| LCS | 114 | 88 |
| LCSD | 114 | 86 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141440024A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7475817 | 65 | 76 |
| 7475818 | 66 | 72 |
| Blank | 82 | 91 |
| LCS | 68 | 74 |
| LCSD | 66 | 74 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| Limits: | 45-126 | 69-119 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141440025A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7475817 | 73 | 83 |
| 7475818 | 75 | 85 |
| Blank | 73 | 85 |
| LCS | 72 | 84 |
| LCSD | 72 | 84 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141470033A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7475820 | 78 | 93 |
| 7475821 | 81 | 92 |
| 7475822 | 71 | 81 |
| 7475823 | 81 | 96 |
| 7475824 | 80 | 87 |
| 7475825 | 82 | 97 |
| 7475826 | 73 | 75 |
| 7475827 | 74 | 66 |
| 7475828 | 75 | 82 |
| Blank | 79 | 90 |
| LCS | 75 | 88 |
| MS | 72 | 83 |
| MSD | 80 | 90 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141470034A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7475820 | 85 | 91 |
| 7475821 | 79 | 88 |
| 7475822 | 68 | 74 |
| 7475823 | 69 | 83 |
| 7475824 | 69 | 76 |
| 7475825 | 73 | 83 |
| 7475826 | 69 | 71 |
| 7475827 | 68 | 60* |
| 7475828 | 75 | 80 |
| Blank | 67 | 80 |
| LCS | 77 | 88 |
| MS | 68 | 75 |
| MSD | 77 | 83 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476822
Reported: 06/09/14 at 01:48 PM

## Surrogate Quality Control

Batch number: 14153002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7475818 | 76 | 86 | 92 | 95 | 92 | 94 |
| Blank | 82 | 84 | 88 | 88 | 87 | 87 |
| OPR | 72 | 84 | 86 | 85 | 85 | 85 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7475818 | 84 | 72 | 87 | 88 | 91 | 92 |
| Blank | 78 | 77 | 86 | 84 | 85 | 88 |
| OPR | 82 | 67 | 79 | 83 | 82 | 83 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7475818 | 93 | 107 | 101 | 89 | 85 |
| Blank | 89 | 105 | 90 | 81 | 74 |
| OPR | 86 | 92 | 86 | 81 | 76 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

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(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/22/2014

CarrierName: FedEx

AirbillNo: 770073250078

A-13013
G-1476822
S-7475817-28

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140522-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-052214 | 5/22/14 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052214 | 5/22/14 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052214 | 5/22/14 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052214 | 5/22/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| EB1-052214 | 5/22/14 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB1-052214 | 5/22/14 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| EB1-052214 | 5/22/14 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB2-052214 | 5/22/14 15:30 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Pam Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stay Myers-Pas | 5/22/14 | 16:00 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/24/14 | 0930 |
| | | | | | | | | | | | |

Final Data Gap Block 2

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/22/2014

CarrierName: FedEx

AirbillNo: 7700 7325 0078

A-13013

G-476822

S-475817-28

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140522-02

Cooler #: 2

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc. Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB1-052214 | 5/22/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-0.0-0.5 | 5/22/14 08:20 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-4.0-5.0 | 5/22/14 08:30 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-4.0-5.0 | 5/22/14 08:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-9.0-10.0 | 5/22/14 08:52 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-9.0-10.0 | 5/22/14 08:52 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-14.0-15.0 | 5/22/14 09:20 | SO | None | 1 - SS-Sleeve | 10 day | X | X | | | | | X | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-14.0-15.0 | 5/22/14 09:20 | SO | None | 1 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-9.0-10.0 | 5/22/14 08:52 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-628-SA8-SB-14.0-15.0 | 5/22/14 09:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-578-NBZ-SB-0.0-0.5 | 5/22/14 11:26 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-578-NBZ-SB-0.0-0.5 | 5/22/14 11:26 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-0.0-0.5 | 5/22/14 13:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-0.0-0.5 | 5/22/14 13:10 | SO | None | 1 - SS-Sleeve | 10 day | X | X | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-4.0-5.0 | 5/22/14 13:20 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | | | | | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-4.0-5.0 | 5/22/14 13:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-9.0-10.0 | 5/22/14 13:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-9.0-10.0 | 5/22/14 13:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-13.0-14.0 | 5/22/14 13:41 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| FDG2-SL-581-NBZ-SB-13.0-14.0 | 5/22/14 13:41 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

FINAL DATA GAP BLOCK 2

Rec'd by Bucancy Bar ELLE 5.23.14 950

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/22/2014 A-13013

CarrierName: FedEx G-1476822

AirbillNo: 7700 7325 0098 S-7475817-28

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140522-02

Cooler #: 2

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Radu Robau

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sergio Mypelos | 5/22/14 | 1000 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | 5.23.14 | | 950 |

FINAL DATA GAP BLOCKER

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15429

Group Number(s): 1476822

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/23/2014 9:50 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 9 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:58 on 05/23/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.6 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.0 | DT | Wet | Y | Bagged | N | N |
| 3 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15541

Group Number(s): 147682

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/24/2014 9:30 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 0 |
| Custody Seal Present: | Yes | Trip Blank Type: | N/A |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 10:08 on 05/24/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | 8013596-IR | 15.3 | IR | Wet | N | Bagged | N | Y |

## Elevated Temperature Details

***All Temperatures in °C***

| Cooler # | Thermometer ID | Top Left Temp | Top Right Temp | Bottom Left Temp | Bottom Right Temp | Center Temp | Factors Contributing to Elevated Temp | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | 8013596-IR | 14.9 | 15.7 | 16.3 | 13.3 | 15.2 | | |

General Comments: Missing cooler from 5/23



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

# ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/24/2014
Group Number: 1476956
SDG: PH197
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| FDG2-SL-561-NBZ-SB-0.0-0.5 Soil | 7476634 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: FDG2-SL-561-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7476634**
**LL Group # 1476956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 09:25 by RR

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56100 SDG#: PH197-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 9.7 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 4.1 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.81 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 10 | U | 10 | 4.0 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 4.1 | J | 10 | 4.0 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-561-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7476634**
**LL Group # 1476956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 09:25 by RR

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56100 SDG#: PH197-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 44 | | 10 | 4.0 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 99 | | 20 | 8.1 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 10 | U | 10 | 4.0 | 2 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 16 | | 5.0 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 7.2 | J | 10 | 4.0 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,960 | | 40.1 | 7.22 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.01 | U | 4.01 | 0.741 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.11 | J | 4.01 | 0.701 | 1 |
| 06946 | Barium | 7440-39-3 | 59.4 | | 1.00 | 0.0330 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.373 | J | 1.00 | 0.0671 | 1 |
| 07914 | Boron | 7440-42-8 | 6.03 | J | 10.0 | 0.841 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.445 | J | 1.00 | 0.0761 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,420 | | 20.0 | 3.34 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.2 | | 3.00 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.10 | | 1.00 | 0.0991 | 1 |
| 06953 | Copper | 7440-50-8 | 7.78 | | 2.00 | 0.290 | 1 |
| 01654 | Iron | 7439-89-6 | 17,600 | | 40.1 | 3.63 | 1 |
| 06955 | Lead | 7439-92-1 | 6.10 | | 3.00 | 0.501 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.6 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,340 | | 10.0 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 224 | | 1.00 | 0.0831 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.00 | U | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.50 | | 2.00 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 396 | | 10.0 | 2.89 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,000 | | 100 | 8.35 | 1 |
| 01667 | Sodium | 7440-23-5 | 111 | | 100 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.31 | J | 10.0 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 794 | | 1.00 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 25.3 | | 1.00 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 59.0 | | 4.01 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.29 | J | 5.01 | 0.841 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.117 | J | 0.401 | 0.100 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0287 | J | 0.200 | 0.0260 | 2 |
| 06144 | Strontium | 7440-24-6 | 20.3 | | 0.401 | 0.0681 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.198 | J | 0.200 | 0.0300 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0169 | U | 0.0169 | 0.0101 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-561-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea NBZ

**LL Sample # SW 7476634**
**LL Group # 1476956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 09:25 by RR

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56100 SDG#: PH197-01*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.45 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.1 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 07:06 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/02/2014 23:16 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 21:28 | Heather E Williams | 2 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/31/2014 00:05 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-561-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea NBZ**

**LL Sample # SW 7476634**
**LL Group # 1476956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 09:25 by RR

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56100 SDG#: PH197-01*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:48 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:43 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:43 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:43 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:43 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:53 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039402A | 05/24/2014 13:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162402A | 05/28/2014 20:13 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476956
Reported: 06/09/14 at 01:48 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155SLA026 | Sample number(s): 7476634 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 80* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 84 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 85 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 80-119 | | |
| Batch number: 141500023A | Sample number(s): 7476634 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 82 | 86 | 36-106 | 5 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 97 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 98 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141470033A | Sample number(s): 7476634 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 87 | | 76-115 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476956
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 78 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 60-115 | | |
| Batch number: 141470034A | Sample number(s): 7476634 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 80 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 62 | | 60-115 | | |
| Batch number: 141470637002 | Sample number(s): 7476634 | | | | | | | | | |
| Aluminum | 9.28 | J | 40.0 | 7.21 | mg/kg | 110 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 0.858 | J | 10.0 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 12.8 | J | 20.0 | 3.34 | mg/kg | 106 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 107 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.36 | J | 10.0 | 0.220 | mg/kg | 104 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Zinc | 0.956 | J | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141470637002A | Sample number(s): 7476634 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 113 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 115 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 108 | | 80-120 | | |
| Batch number: 141470637002B | Sample number(s): 7476634 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141480638002 | Sample number(s): 7476634 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 85 | | 85-120 | | |
| Batch number: 14144039402A | Sample number(s): 7476634 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476956
Reported: 06/09/14 at 01:48 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14148162402A | Sample number(s): 7476634 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155SLA026 | Sample number(s): 7476634 UNSPK: P475537 | | | | | | | | |
| Acenaphthene | 109 | 109 | 48-127 | 1 | 30 | | | | |
| Acenaphthylene | 101 | 101 | 60-128 | 0 | 30 | | | | |
| Anthracene | 105 | 102 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 94 | 94 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 84 | 84 | 49-137 | 0 | 30 | | | | |
| Benzo(b)fluoranthene | 94 | 93 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 76 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 96 | 95 | 33-141 | 1 | 30 | | | | |
| Benzo(k)fluoranthene | 81 | 81 | 49-144 | 0 | 30 | | | | |
| Butylbenzylphthalate | 98 | 97 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 98 | 99 | 52-147 | 0 | 30 | | | | |
| Chrysene | 89 | 89 | 43-141 | 0 | 30 | | | | |
| Dibenz(a,h)anthracene | 101 | 102 | 25-145 | 0 | 30 | | | | |
| Diethylphthalate | 90 | 91 | 66-140 | 0 | 30 | | | | |
| Dimethylphthalate | 82 | 80 | 70-123 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 99 | 48-164 | 2 | 30 | | | | |
| Fluoranthene | 96 | 96 | 38-153 | 0 | 30 | | | | |
| Fluorene | 97 | 96 | 57-130 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 96 | 95 | 26-139 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 94 | 93 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 99 | 99 | 46-147 | 0 | 30 | | | | |
| Naphthalene | 96 | 94 | 52-136 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 86 | 87 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 100 | 100 | 52-162 | 0 | 30 | | | | |
| Phenanthrene | 99 | 97 | 50-137 | 2 | 30 | | | | |
| Pyrene | 83 | 83 | 26-143 | 0 | 30 | | | | |
| Batch number: 141500023A | Sample number(s): 7476634 UNSPK: 7476634 | | | | | | | | |
| PCB-1016 | 95 | 96 | 41-135 | 1 | 50 | | | | |
| PCB-1260 | 94 | 99 | 40-134 | 5 | 50 | | | | |
| Batch number: 141470033A | Sample number(s): 7476634 UNSPK: P475537 | | | | | | | | |
| EFH (C12-C14) | 82 | 91 | 49-123 | 9 | 20 | | | | |
| EFH (C15-C20) | 85 | 95 | 49-123 | 9 | 20 | | | | |
| EFH (C21-C30) | 86 | 96 | 49-123 | 10 | 20 | | | | |
| EFH (C30-C40) | 69 | 74 | 49-123 | 6 | 20 | | | | |
| EFH (C8-C11) | 73 | 83 | 49-123 | 12 | 20 | | | | |
| Batch number: 141470034A | Sample number(s): 7476634 UNSPK: P475537 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 72 | 81 | 49-123 | 11 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 74 | 83 | 49-123 | 10 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 75 | 84 | 49-123 | 10 | 20 | | | | |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476956
Reported: 06/09/14 at 01:48 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| EFH C30-C40 w/ SiGel | 68 | 75 | 49-123 | 8 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 56 | 65 | 49-123 | 15 | 20 | | | | |
| Batch number: 141470637002 | Sample number(s): 7476634 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Aluminum | 372 (2) | 821 (2) | 75-125 | 6 | 20 | 15,100 | 13,200 | 13 | 20 |
| Antimony | 52* | 51* | 75-125 | 2 | 20 | 4.00 U | 4.00 U | 0 (1) | 20 |
| Arsenic | 96 | 96 | 75-125 | 2 | 20 | 4.11 | 3.09 J | 28* (1) | 20 |
| Barium | 35* | 37* | 75-125 | 2 | 20 | 230 | 94.1 | 84* | 20 |
| Beryllium | 101 | 102 | 75-125 | 3 | 20 | 0.562 J | 0.486 J | 15 (1) | 20 |
| Boron | 98 | 98 | 75-125 | 3 | 20 | 6.78 J | 4.93 J | 32* (1) | 20 |
| Cadmium | 97 | 97 | 75-125 | 3 | 20 | 0.549 J | 0.491 J | 11 (1) | 20 |
| Calcium | 149 (2) | 103 (2) | 75-125 | 5 | 20 | 2,920 | 2,520 | 15 | 20 |
| Chromium | 81 | 89 | 75-125 | 5 | 20 | 20.4 | 16.4 | 22* | 20 |
| Cobalt | 96 | 97 | 75-125 | 4 | 20 | 5.22 | 5.04 | 4 | 20 |
| Copper | 102 | 105 | 75-125 | 4 | 20 | 10.3 | 8.93 | 14 (1) | 20 |
| Iron | -2173 (2) | -1295 (2) | 75-125 | 5 | 20 | 18,600 | 17,400 | 7 | 20 |
| Lead | 98 | 93 | 75-125 | 2 | 20 | 6.89 | 5.48 | 23* (1) | 20 |
| Lithium | 99 | 101 | 75-125 | 4 | 20 | 21.7 | 20.3 | 7 | 20 |
| Magnesium | -196 (2) | -75 (2) | 75-125 | 6 | 20 | 4,220 | 3,840 | 9 | 20 |
| Manganese | 156 (2) | 119 (2) | 75-125 | 5 | 20 | 291 | 294 | 1 | 20 |
| Molybdenum | 95 | 96 | 75-125 | 3 | 20 | 0.441 J | 0.329 J | 29* (1) | 20 |
| Nickel | 96 | 97 | 75-125 | 4 | 20 | 11.0 | 10.8 | 3 | 20 |
| Phosphorus | 106 | 38* | 75-125 | 15 | 20 | 372 | 354 | 5 | 20 |
| Potassium | 108 | 109 | 75-125 | 1 | 20 | 3,220 | 3,070 | 5 | 20 |
| Sodium | 95 | 96 | 75-125 | 4 | 20 | 111 | 102 | 8 (1) | 20 |
| Tin | 90 | 90 | 75-125 | 3 | 20 | 2.39 J | 2.23 J | 7 (1) | 20 |
| Titanium | 150 (2) | 258 (2) | 75-125 | 9 | 20 | 1,070 | 994 | 8 | 20 |
| Vanadium | 97 | 102 | 75-125 | 5 | 20 | 34.9 | 30.6 | 13 | 20 |
| Zinc | 93 | 89 | 75-125 | 1 | 20 | 56.3 | 52.0 | 8 | 20 |
| Zirconium | 98 | 98 | 75-125 | 4 | 20 | 3.99 J | 4.08 J | 2 (1) | 20 |
| Batch number: 141470637002A | Sample number(s): 7476634 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Silver | 105 | 102 | 75-125 | 0 | 20 | 0.0276 J | 0.0297 J | 8 (1) | 20 |
| Strontium | 106 | 92 | 75-125 | 3 | 20 | 22.8 | 19.7 | 15 | 20 |
| Thallium | 120 | 112 | 75-125 | 2 | 20 | 0.256 | 0.252 | 1 (1) | 20 |
| Batch number: 141470637002B | Sample number(s): 7476634 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Selenium | 99 | 99 | 75-125 | 3 | 20 | 0.137 J | 0.118 J | 15 (1) | 20 |
| Batch number: 141480638002 | Sample number(s): 7476634 UNSPK: P475537 BKG: P475537 | | | | | | | | |
| 3a Mercury 7471A | 91 | 92 | 65-135 | 2 | 20 | 0.0111 J | 0.0105 J | 6 (1) | 20 |
| Batch number: 14144039402A | Sample number(s): 7476634 BKG: 7476634 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.45 | 7.48 | 0 | 3 |
| Batch number: 14148162402A | Sample number(s): 7476634 BKG: P475826 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 9.4 | 8.9 | 6 | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476956
Reported: 06/09/14 at 01:48 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14155SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7476634 | 90 | 100 | 85 |
| Blank | 106 | 122* | 93 |
| LCS | 107 | 123* | 94 |
| MS | 98 | 114 | 91 |
| MSD | 98 | 114 | 92 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141500023A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7476634 | 110 | 102 |
| Blank | 115 | 102 |
| LCS | 111 | 101 |
| LCSD | 119 | 104 |
| MS | 107 | 101 |
| MSD | 108 | 105 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141470033A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7476634 | 76 | 90 |
| Blank | 79 | 90 |
| LCS | 75 | 88 |
| MS | 72 | 83 |
| MSD | 80 | 90 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141470034A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7476634 | 75 | 82 |
| Blank | 67 | 80 |
| LCS | 77 | 88 |
| MS | 68 | 75 |
| MSD | 77 | 83 |
| Limits: | 37-125 | 66-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476956
Reported: 06/09/14 at 01:48 PM

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/23/2014

CarrierName: FedEx

AirbillNo: ~~770081777065~~ sm52314
7700 8382 3163

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

A-13013
G-1476956
S-7476634

COC No: 20140523-02

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FDG2-SL-561-NBZ-SB-0.0-0.5 | 5/23/14 09:25 | SO | None | 1 - 16 oz glass | 10 day | X | X | | | | | X | | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | |
| FDG2-SL-561-NBZ-SB-0.0-0.5 | 5/23/14 09:25 | SO | None | 1 - SS-Sleeve | 10 day | X | X | | | | | X | | | X | | | | | | | | | | X | | | | | | | | | | | | | | | |

For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

Special Instructions:

**Sampler:** Randall Roberts

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/23/14 | 1300 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/24/14 | 0930 ~~0830~~ ③ JG 5/24/14 |

FINAL DATA GAP
BLOCK 2

1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15546

Group Number(s): 1476956

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/24/2014 9:30 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 10:51 on 05/24/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 3.4 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

REVISED

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 21, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/24/2014
Group Number: 1476957
SDG: PH198
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-052314 Water | 7476635 |
| SVL-536-SA5D-SB-1.8-2.3 Soil | 7476636 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

REVISED

**Sample Description: TB2-052314 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7476635**
**LL Group # 1476957**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:00

Submitted: 05/24/2014 09:30
Reported: 07/21/2014 15:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB523 SDG#: PH198-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: TB2-052314 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7476635**
**LL Group # 1476957**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:00

Submitted: 05/24/2014 09:30
Reported: 07/21/2014 15:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB523 SDG#: PH198-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chlorotrifluoroethene.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141471AA | 05/27/2014 14:54 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141471AA | 05/27/2014 14:54 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-536-SA5D-SB-1.8-2.3 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7476636**
**LL Group # 1476957**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 10:54 by VV

Submitted: 05/24/2014 09:30
Reported: 07/21/2014 15:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53618 SDG#: PH198-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.98 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.98 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.98 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.98 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.98 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.98 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.98 |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-536-SA5D-SB-1.8-2.3 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7476636**
**LL Group # 1476957**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 10:54 by VV

Submitted: 05/24/2014 09:30
Reported: 07/21/2014 15:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53618 SDG#: PH198-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.98 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.98 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.98 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.98 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.98 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141491AA | 05/29/2014 09:19 | Stephanie A Selis | 0.98 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414434617 | 05/24/2014 19:06 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

REVISED

**Sample Description: SVL-536-SA5D-SB-1.8-2.3 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7476636**
**LL Group # 1476957**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 10:54 by VV

Submitted: 05/24/2014 09:30
Reported: 07/21/2014 15:45

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

53618 SDG#: PH198-02*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414434617 | 05/24/2014 19:06 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414434617 | 05/24/2014 18:59 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14148162401C | 05/28/2014 20:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476957
Reported: 07/21/14 at 03:45 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7476636 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 108 | 112 | 41-149 | 3 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 92 | 88 | 50-137 | 5 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 91 | 88 | 58-123 | 3 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 86 | 88 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 96 | 93 | 80-120 | 3 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 120 | 117 | 75-129 | 2 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 96 | 95 | 75-120 | 1 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 102 | 96 | 70-126 | 6 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 109 | 108 | 32-162 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 98 | 99 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 93 | 99 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 95 | 93 | 72-120 | 2 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 97 | 93 | 69-120 | 4 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 94 | 95 | 75-120 | 1 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 73 | 71 | 63-128 | 3 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 98 | 96 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 100 | 95 | 80-120 | 5 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 102 | 101 | 17-171 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 87 | 90 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 108 | 106 | 80-120 | 2 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 91 | 85 | 70-130 | 6 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 89 | 85 | 56-120 | 4 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 93 | 93 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 94 | 96 | 79-120 | 2 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 95 | 89 | 22-131 | 6 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 79 | 90 | 50-132 | 13 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 99 | 95 | 77-120 | 4 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 80-120 | 2 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 75-120 | 2 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 99 | 98 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 98 | 80-120 | 5 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 93 | 102 | 80-120 | 10 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 74 | 71 | 26-137 | 5 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 96 | 71-122 | 2 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 110 | 108 | 66-136 | 1 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 103 | 100 | 73-129 | 3 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 100 | 80-120 | 4 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 106 | 103 | 79-120 | 3 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 96 | 97 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 73-120 | 1 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 90 | 88 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476957
Reported: 07/21/14 at 03:45 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 100 | 96 | 77-120 | 4 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 74-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 88 | 86 | 69-120 | 2 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 88 | 89 | 59-134 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 98 | 94 | 80-120 | 4 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 74 | 71 | 64-137 | 3 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 118 | 113 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 105 | 105 | 46-130 | 0 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 86 | 85 | 40-129 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 92 | 92 | 68-128 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 101 | 97 | 76-120 | 4 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 89 | 88 | 69-120 | 2 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 102 | 99 | 72-130 | 3 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 93 | 91 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 91 | 92 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 104 | 103 | 80-124 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 96 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 101 | 96 | 76-120 | 4 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 95 | 80-120 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 86 | 93 | 71-123 | 8 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 106 | 103 | 78-120 | 3 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 94 | 89 | 80-120 | 5 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 105 | 100 | 64-120 | 5 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 97 | 99 | 68-120 | 3 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 63-135 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 100 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 102 | 101 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 91 | 86 | 58-133 | 5 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 94 | 100 | 71-123 | 6 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 95 | 93 | 79-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 94 | 95 | 78-120 | 2 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 74 | 70 | 40-127 | 6 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 93 | 92 | 59-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 99 | 97 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 97 | 94 | 80-120 | 3 | 30 |
| Batch number: Y141471AA | Sample number(s): 7476635 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 78 | 84 | 43-149 | 7 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 94 | 89 | 52-129 | 4 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 77 | 83 | 62-120 | 7 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 75-120 | 1 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 102 | 103 | 80-121 | 0 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 73-120 | 0 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 86 | 85 | 61-120 | 1 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 104 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 72 | 79 | 54-133 | 9 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 97 | 103 | 75-120 | 7 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 100 | 103 | 73-120 | 3 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 69 | 68 | 58-126 | 2 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 107 | 109 | 74-130 | 2 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 104 | 103 | 80-120 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476957
Reported: 07/21/14 at 03:45 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 89 | 56-120 | 1 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 102 | 103 | 54-126 | 1 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 106 | 107 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 104 | 105 | 80-120 | 1 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 118 | 120 | 63-120 | 2 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 46* | 48 | 47-120 | 5 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 75 | 83 | 56-120 | 10 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 72-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 101 | 76-120 | 1 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 115 | 116 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 106 | 106 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 112 | 113 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 116 | 118 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 101 | 101 | 80-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 110 | 110 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 97 | 98 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 102 | 103 | 79-120 | 0 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 101 | 100 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 79 | 82 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 100 | 98 | 51-125 | 2 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 74 | 80 | 44-126 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 98 | 98 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 104 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 105 | 106 | 75-128 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 108 | 108 | 75-120 | 0 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 78 | 84 | 51-124 | 6 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 116 | 116 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 104 | 103 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 103 | 101 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 92 | 70-120 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 107 | 108 | 80-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 58-126 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 98 | 100 | 80-120 | 2 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 106 | 109 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 117 | 115 | 65-130 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 89 | 94 | 76-120 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 103 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 102 | 104 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 74 | 56-135 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476957
Reported: 07/21/14 at 03:45 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 111 | 112 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| Batch number: 14148162401C | Sample number(s): 7476636 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141491AA | Sample number(s): 7476636 UNSPK: P475237 | | | | | | | | |
| Acetone | 109 | 118 | 31-195 | 7 | 30 | | | | |
| Acrolein | 87 | 71 | 10-165 | 22 | 30 | | | | |
| Acrylonitrile | 75 | 82 | 48-139 | 8 | 30 | | | | |
| t-Amyl methyl ether | 83 | 85 | 50-132 | 2 | 30 | | | | |
| Benzene | 101 | 94 | 55-143 | 8 | 30 | | | | |
| Bromobenzene | 109 | 92 | 43-139 | 18 | 30 | | | | |
| Bromochloromethane | 118 | 110 | 60-137 | 8 | 30 | | | | |
| Bromodichloromethane | 98 | 91 | 53-136 | 8 | 30 | | | | |
| Bromoform | 94 | 91 | 50-144 | 4 | 30 | | | | |
| Bromomethane | 121 | 111 | 42-168 | 9 | 30 | | | | |
| 2-Butanone | 85 | 93 | 37-163 | 8 | 30 | | | | |
| t-Butyl alcohol | 95 | 88 | 47-153 | 8 | 30 | | | | |
| n-Butylbenzene | 115 | 76 | 30-146 | 42* | 30 | | | | |
| sec-Butylbenzene | 109 | 88 | 33-157 | 23 | 30 | | | | |
| tert-Butylbenzene | 108 | 86 | 41-152 | 23 | 30 | | | | |
| Carbon Disulfide | 78 | 71 | 48-146 | 9 | 30 | | | | |
| Carbon Tetrachloride | 109 | 100 | 51-165 | 9 | 30 | | | | |
| Chlorobenzene | 105 | 93 | 49-135 | 13 | 30 | | | | |
| Chloroethane | 114 | 106 | 39-152 | 8 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 73 | 76 | 32-139 | 3 | 30 | | | | |
| Chloroform | 111 | 105 | 61-142 | 7 | 30 | | | | |
| 1-Chlorohexane | 106 | 89 | 70-130 | 18 | 30 | | | | |
| Chloromethane | 102 | 93 | 36-143 | 9 | 30 | | | | |
| 2-Chlorotoluene | 105 | 88 | 42-146 | 18 | 30 | | | | |
| 4-Chlorotoluene | 108 | 85 | 39-145 | 24 | 30 | | | | |
| Chlorotrifluoroethene | 109 | 105 | 70-130 | 0 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 79 | 74 | 34-165 | 7 | 30 | | | | |
| Dibromochloromethane | 97 | 90 | 51-128 | 8 | 30 | | | | |
| 1,2-Dibromoethane | 95 | 91 | 54-129 | 5 | 30 | | | | |
| Dibromomethane | 95 | 93 | 57-130 | 3 | 30 | | | | |
| 1,2-Dichlorobenzene | 111 | 89 | 36-133 | 24 | 30 | | | | |
| 1,3-Dichlorobenzene | 108 | 86 | 34-134 | 24 | 30 | | | | |
| 1,4-Dichlorobenzene | 108 | 83 | 35-136 | 27 | 30 | | | | |
| Dichlorodifluoromethane | 106 | 102 | 26-151 | 5 | 30 | | | | |
| 1,1-Dichloroethane | 100 | 95 | 63-142 | 7 | 30 | | | | |
| 1,2-Dichloroethane | 108 | 104 | 54-143 | 5 | 30 | | | | |
| 1,1-Dichloroethene | 111 | 105 | 61-149 | 6 | 30 | | | | |
| cis-1,2-Dichloroethene | 103 | 98 | 67-135 | 6 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476957
Reported: 07/21/14 at 03:45 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 111 | 103 | 64-144 | 9 | 30 | | | | |
| 1,2-Dichloropropane | 97 | 93 | 54-144 | 6 | 30 | | | | |
| 1,3-Dichloropropane | 94 | 89 | 51-140 | 6 | 30 | | | | |
| 2,2-Dichloropropane | 94 | 88 | 53-147 | 8 | 30 | | | | |
| 1,1-Dichloropropene | 106 | 97 | 54-145 | 10 | 30 | | | | |
| cis-1,3-Dichloropropene | 88 | 86 | 45-137 | 3 | 30 | | | | |
| trans-1,3-Dichloropropene | 85 | 82 | 51-134 | 5 | 30 | | | | |
| Ethyl t-butyl ether | 85 | 87 | 58-124 | 2 | 30 | | | | |
| Ethylbenzene | 102 | 91 | 44-141 | 13 | 30 | | | | |
| Freon 113 | 102 | 91 | 56-156 | 12 | 30 | | | | |
| Freon 133a | 118 | 116 | 61-131 | 2 | 30 | | | | |
| Hexachlorobutadiene | 127 | 75 | 10-155 | 53* | 30 | | | | |
| 2-Hexanone | 74 | 81 | 32-160 | 8 | 30 | | | | |
| di-Isopropyl ether | 91 | 90 | 59-133 | 3 | 30 | | | | |
| Isopropylbenzene | 108 | 89 | 38-144 | 21 | 30 | | | | |
| p-Isopropyltoluene | 103 | 79 | 29-152 | 28 | 30 | | | | |
| Methyl Iodide | 106 | 99 | 52-139 | 8 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 86 | 90 | 55-129 | 4 | 30 | | | | |
| 4-Methyl-2-pentanone | 75 | 82 | 46-139 | 9 | 30 | | | | |
| Methylene Chloride | 107 | 100 | 60-149 | 7 | 30 | | | | |
| n-Propylbenzene | 111 | 88 | 39-157 | 23 | 30 | | | | |
| Styrene | 105 | 90 | 35-134 | 16 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 101 | 92 | 55-139 | 11 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 88 | 87 | 29-182 | 2 | 30 | | | | |
| Tetrachloroethene | 134 | 112 | 42-149 | 19 | 30 | | | | |
| Toluene | 102 | 87 | 50-146 | 16 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 104 | 75 | 10-140 | 33* | 30 | | | | |
| 1,2,4-Trichlorobenzene | 102 | 73 | 10-136 | 33* | 30 | | | | |
| 1,1,1-Trichloroethane | 99 | 93 | 52-146 | 7 | 30 | | | | |
| 1,1,2-Trichloroethane | 99 | 95 | 58-152 | 5 | 30 | | | | |
| Trichloroethene | 105 | 97 | 53-144 | 9 | 30 | | | | |
| Trichlorofluoromethane | 116 | 104 | 47-163 | 12 | 30 | | | | |
| 1,2,3-Trichloropropane | 95 | 91 | 36-180 | 5 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 104 | 86 | 37-149 | 20 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 109 | 87 | 38-150 | 24 | 30 | | | | |
| Vinyl Acetate | 46 | 40 | 21-139 | 12 | 30 | | | | |
| Vinyl Chloride | 111 | 100 | 50-154 | 11 | 30 | | | | |
| m+p-Xylene | 104 | 88 | 44-137 | 18 | 30 | | | | |
| o-Xylene | 101 | 89 | 42-137 | 14 | 30 | | | | |
| Batch number: 14148162401C | Sample number(s): 7476636 | | BKG: P475537 | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 10.1 | 9.8 | 3 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476957
Reported: 07/21/14 at 03:45 PM

## Surrogate Quality Control

Batch number: B141491AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7476636 | 105 | 101 | 97 | 92 |
| Blank | 109 | 104 | 97 | 94 |
| LCS | 106 | 105 | 97 | 109 |
| LCSD | 106 | 103 | 98 | 102 |
| MS | 104 | 98 | 103 | 100 |
| MSD | 106 | 105 | 102 | 102 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141471AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7476635 | 103 | 100 | 98 | 95 |
| Blank | 101 | 100 | 99 | 96 |
| LCS | 101 | 99 | 100 | 100 |
| LCSD | 101 | 101 | 100 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/23/2014

CarrierName: FedEx

AirbillNo: ~~770081777065~~ Sm52314
7700 8382 3163

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

A-13013
G-1476957
S-7476635-36

COC No: 20140523-03

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-052314 | 5/23/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-536-SA5D-SB-1.8-2.3 | 5/23/14 10:54 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | soil moisture |
| SVL-536-SA5D-SB-1.8-2.3 | 5/23/14 10:54 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Van Vathanasin

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/23/14 | 1300 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/24/14 | 0930 |

Soil Vapor

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15546

Group Number(s): 1476957

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/24/2014 9:30 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 10:51 on 05/24/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 3.4 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/24/2014
Group Number: 1476958
SDG: PH199
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB3-052314 Water | 7476637 |
| SL-636-SA5A-TR-0.5 Soil | 7476638 |
| SL-636-SA5A-TR-3.5 Soil | 7476639 |
| SL-636-SA5A-TR-7.5 Soil | 7476640 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB3-052314 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7476637**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:00

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB323 SDG#: PH199-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14149A94A | 05/30/2014 01:54 | Miranda P Tillinghast | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14149A94A | 05/30/2014 01:54 | Miranda P Tillinghast | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476638**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 07:46 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63605 SDG#: PH199-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.5 | J | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 8.4 | J | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476638**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 07:46 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63605 SDG#: PH199-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 43 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 6.0 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 14 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,300 | | 40.0 | 7.20 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.00 | U | 4.00 | 0.739 | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.91 | J | 4.00 | 0.699 | 1 |
| 06946 | Barium | 7440-39-3 | 67.9 | | 0.999 | 0.0330 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.380 | J | 0.999 | 0.0669 | 1 |
| 07914 | Boron | 7440-42-8 | 3.55 | J | 9.99 | 0.839 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.428 | J | 0.999 | 0.0759 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,600 | | 20.0 | 3.34 | 1 |
| 06951 | Chromium | 7440-47-3 | 11.5 | | 3.00 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.62 | | 0.999 | 0.0989 | 1 |
| 06953 | Copper | 7440-50-8 | 5.60 | | 2.00 | 0.290 | 1 |
| 01654 | Iron | 7439-89-6 | 17,100 | | 40.0 | 3.62 | 1 |
| 06955 | Lead | 7439-92-1 | 4.19 | | 3.00 | 0.499 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.1 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,440 | | 9.99 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 240 | | 0.999 | 0.0829 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.00 | U | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.13 | | 2.00 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 302 | | 9.99 | 2.89 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,840 | | 99.9 | 8.33 | 1 |
| 01667 | Sodium | 7440-23-5 | 146 | | 99.9 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 2.40 | J | 9.99 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 958 | | 0.999 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 24.0 | | 0.999 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 63.8 | | 4.00 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.36 | J | 4.99 | 0.839 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.400 | U | 0.400 | 0.0999 | 2 |
| 06142 | Silver | 7440-22-4 | 0.200 | U | 0.200 | 0.0260 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.2 | | 0.400 | 0.0679 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.264 | | 0.200 | 0.0300 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0143 | J | 0.0167 | 0.0100 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476638**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 07:46 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63605 SDG#: PH199-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D | n.a. | 8.39 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.8 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-636-SA5A-TR-0.5 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7476638**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 07:46 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63605 SDG#: PH199-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.990 | U | 0.990 | 0.0447 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.158 | JBQ | 4.95 | 0.0446 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0985 | JBQ | 4.95 | 0.0309 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.214 | JBQ | 4.95 | 0.0319 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.171 | JB | 4.95 | 0.0297 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.52 | JB | 4.95 | 0.0373 | 1 |
| 11031 | OCDD | 3268-87-9 | 39.1 | B | 9.90 | 0.0338 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.990 | U | 0.990 | 0.0515 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 3.08 | JB | 4.95 | 0.0278 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.178 | JBQ | 4.95 | 0.0286 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.156 | JB | 4.95 | 0.0341 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.218 | JBQ | 4.95 | 0.0290 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.138 | JB | 4.95 | 0.0347 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.134 | JB | 4.95 | 0.0330 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.686 | JB | 4.95 | 0.0173 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0658 | JB | 4.95 | 0.0240 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.56 | JB | 9.90 | 0.0425 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.207 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 90 | 25 - 164 |
| 13C12-12378-PeCDD | 92 | 25 - 181 |
| 13C12-123478-HxCDD | 84 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 71 | 17 - 157 |
| 13C12-2378-TCDF | 94 | 24 - 169 |
| 13C12-12378-PeCDF | 96 | 24 - 185 |
| 13C12-23478-PeCDF | 90 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 79 | 28 - 136 |
| 13C12-123789-HxCDF | 79 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 66 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476638**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 07:46 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63605 SDG#: PH199-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476638**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 07:46 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63605 SDG#: PH199-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 09:46 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 00:11 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 21:50 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/31/2014 01:32 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 21:45 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:52 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476638**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 07:46 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63605 SDG#: PH199-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:45 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:45 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:45 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:45 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:55 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039402A | 05/24/2014 13:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-636-SA5A-TR-3.5 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7476639**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:47 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63635 SDG#: PH199-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 23.15 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476639**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:47 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63635 SDG#: PH199-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.8 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 18 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,500 | | 41.3 | 7.45 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.13 | U | 4.13 | 0.764 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.49 | J | 4.13 | 0.723 | 1 |
| 06946 | Barium | 7440-39-3 | 111 | | 1.03 | 0.0341 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.565 | J | 1.03 | 0.0692 | 1 |
| 07914 | Boron | 7440-42-8 | 4.61 | J | 10.3 | 0.868 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.590 | J | 1.03 | 0.0785 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,620 | | 20.7 | 3.45 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.3 | | 3.10 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.81 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 11.2 | | 2.07 | 0.300 | 1 |
| 01654 | Iron | 7439-89-6 | 19,300 | | 41.3 | 3.74 | 1 |
| 06955 | Lead | 7439-92-1 | 5.23 | | 3.10 | 0.517 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.0 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,090 | | 10.3 | 1.73 | 1 |
| 06958 | Manganese | 7439-96-5 | 338 | | 1.03 | 0.0857 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.329 | J | 2.07 | 0.176 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.7 | | 2.07 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 382 | | 10.3 | 2.99 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,110 | | 103 | 8.62 | 1 |
| 01667 | Sodium | 7440-23-5 | 273 | | 103 | 17.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.32 | J | 10.3 | 0.227 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,080 | | 1.03 | 0.176 | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.9 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 57.3 | | 4.13 | 0.207 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.67 | J | 5.17 | 0.868 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.141 | J | 0.413 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0338 | J | 0.207 | 0.0269 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.3 | | 0.413 | 0.0702 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.325 | | 0.207 | 0.0310 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0173 | U | 0.0173 | 0.0104 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476639**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:47 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63635 SDG#: PH199-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 8.45 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.1 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-636-SA5A-TR-3.5 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7476639**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:47 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63635 SDG#: PH199-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0593 JBQ | 1.02 | 0.0461 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.134 JB | 5.09 | 0.0362 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0278 JBQ | 5.09 | 0.0261 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.291 JBQ | 5.09 | 0.0281 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.545 JB | 5.09 | 0.0268 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.320 JB | 5.09 | 0.0264 | 1 |
| 11031 | OCDD | 3268-87-9 | 3.87 JB | 10.2 | 0.0227 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 U | 1.02 | 0.0401 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.184 JB | 5.09 | 0.0175 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0749 JB | 5.09 | 0.0194 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0765 JB | 5.09 | 0.0238 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.09 U | 5.09 | 0.0197 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.282 JBQ | 5.09 | 0.0289 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0307 JBQ | 5.09 | 0.0227 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.128 JBQ | 5.09 | 0.0107 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0309 JBQ | 5.09 | 0.0223 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.195 JBQ | 10.2 | 0.0504 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.229 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 78 | 25 - 164 |
| 13C12-12378-PeCDD | 84 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 68 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 90 | 24 - 185 |
| 13C12-23478-PeCDF | 77 | 21 - 178 |
| 13C12-123478-HxCDF | 66 | 26 - 152 |
| 13C12-123678-HxCDF | 79 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 60 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 51 | 26 - 138 |
| 13C12-OCDF | 41 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476639**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:47 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63635 SDG#: PH199-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476639**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:47 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63635 SDG#: PH199-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 07:38 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/30/2014 04:15 | Marie D Beamenderfer | 23.15 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414434616 | 05/24/2014 19:02 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414434616 | 05/24/2014 19:03 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 00:29 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/29/2014 20:23 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/31/2014 00:27 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 22:42 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476639**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:47 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63635 SDG#: PH199-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 21:56 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:47 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:47 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:47 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:47 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 20:57 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039402A | 05/24/2014 13:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476640**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:41 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63675 SDG#: PH199-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 24.8 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476640**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:41 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63675 SDG#: PH199-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 20,000 | | 42.0 | 7.58 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.20 | U | 4.20 | 0.778 | 1 |
| 06935 | Arsenic | 7440-38-2 | 9.15 | | 4.20 | 0.736 | 1 |
| 06946 | Barium | 7440-39-3 | 121 | | 1.05 | 0.0347 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.915 | J | 1.05 | 0.0704 | 1 |
| 07914 | Boron | 7440-42-8 | 6.78 | J | 10.5 | 0.883 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.711 | J | 1.05 | 0.0799 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,310 | | 21.0 | 3.51 | 1 |
| 06951 | Chromium | 7440-47-3 | 33.4 | | 3.15 | 0.168 | 1 |
| 06952 | Cobalt | 7440-48-4 | 11.7 | | 1.05 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 16.7 | | 2.10 | 0.305 | 1 |
| 01654 | Iron | 7439-89-6 | 30,400 | | 84.1 | 7.61 | 2 |
| 06955 | Lead | 7439-92-1 | 9.08 | | 3.15 | 0.526 | 1 |
| 01656 | Lithium | 7439-93-2 | 38.7 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,790 | | 10.5 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 666 | | 1.05 | 0.0872 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.261 | J | 2.10 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 20.2 | | 2.10 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 449 | | 10.5 | 3.04 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,680 | | 105 | 8.77 | 1 |
| 01667 | Sodium | 7440-23-5 | 122 | | 105 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.26 | J | 10.5 | 0.231 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,260 | | 1.05 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 55.5 | | 1.05 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 72.1 | | 4.20 | 0.210 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.60 | J | 5.26 | 0.883 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.129 | J | 0.420 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0811 | J | 0.210 | 0.0273 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.2 | | 0.420 | 0.0715 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.341 | | 0.210 | 0.0315 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0174 | U | 0.0174 | 0.0104 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476640**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:41 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63675 SDG#: PH199-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.1 C. | n.a. | 7.67 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.8 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476640**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:41 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63675 SDG#: PH199-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 U | 1.02 | 0.0553 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.12 U | 5.12 | 0.0333 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0281 JBQ | 5.12 | 0.0223 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0595 JBQ | 5.12 | 0.0235 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0663 JBQ | 5.12 | 0.0226 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.0665 JBQ | 5.12 | 0.0270 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.598 JB | 10.2 | 0.0205 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 U | 1.02 | 0.0403 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0362 JBQ | 5.12 | 0.0164 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0342 JBQ | 5.12 | 0.0176 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0419 JB | 5.12 | 0.0218 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0544 JBQ | 5.12 | 0.0191 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0904 JBQ | 5.12 | 0.0258 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0258 JBQ | 5.12 | 0.0204 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0678 JB | 5.12 | 0.00919 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0440 JB | 5.12 | 0.0174 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.147 JBQ | 10.2 | 0.0483 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00549 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 80 | 24 - 169 |
| 13C12-12378-PeCDF | 90 | 24 - 185 |
| 13C12-23478-PeCDF | 80 | 21 - 178 |
| 13C12-123478-HxCDF | 70 | 26 - 152 |
| 13C12-123678-HxCDF | 83 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 69 | 29 - 147 |
| 13C12-1234678-HpCDF | 98 | 28 - 143 |
| 13C12-1234789-HpCDF | 58 | 26 - 138 |
| 13C12-OCDF | 50 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476640**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:41 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63675 SDG#: PH199-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476640**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:41 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63675 SDG#: PH199-04*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155SLA026 | 06/06/2014 08:10 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14155SLA026 | 06/05/2014 02:15 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14147C16A | 05/30/2014 04:53 | Marie D Beamenderfer | 24.8 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414434616 | 05/24/2014 19:01 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414434616 | 05/24/2014 19:01 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 00:48 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141470033A | 05/28/2014 21:58 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141470034A | 05/31/2014 00:49 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141470034A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141470033A | 05/28/2014 11:00 | William H Saadeh | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14153005 | 06/05/2014 23:38 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14153005 | 06/02/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141470637002 | 05/29/2014 08:01 | Joanne M Gates | 2 |
| 06955 | Lead | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-636-SA5A-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7476640**
**LL Group # 1476958**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/23/2014 08:41 by RE

Submitted: 05/24/2014 09:30
Reported: 06/09/2014 13:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63675 SDG#: PH199-04*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141470637002 | 05/28/2014 22:08 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141470637002B | 05/28/2014 19:54 | John P Hook | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:54 | John P Hook | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:54 | John P Hook | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141470637002A | 05/28/2014 19:54 | John P Hook | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141480638002 | 06/04/2014 21:03 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141470637002 | 05/28/2014 07:39 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141480638002 | 06/02/2014 01:30 | Annamaria Kuhns | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14144039402A | 05/24/2014 13:10 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14147162401B | 05/27/2014 17:27 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155SLA026 | Sample number(s): 7476638-7476640 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 106 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 111 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 80* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 84 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 105 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 91 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 85 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 80-119 | | |
| Batch number: 14147C16A | Sample number(s): 7476639-7476640 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 70 | | 67-120 | | |
| Batch number: 14149A94A | Sample number(s): 7476637 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 96 | 95 | 80-133 | 1 | 30 |
| Batch number: 141500023A | Sample number(s): 7476638-7476640 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 82 | 86 | 36-106 | 5 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 97 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 98 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141470033A | Sample number(s): 7476638-7476640 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 87 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 78 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 74 | | 60-115 | | |
| Batch number: 141470034A | Sample number(s): 7476638-7476640 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 90 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 80 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 62 | | 60-115 | | |
| Batch number: 141470637002 | Sample number(s): 7476638-7476640 | | | | | | | | | |
| Aluminum | 9.28 | J | 40.0 | 7.21 | mg/kg | 110 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 103 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 0.858 | J | 10.0 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 12.8 | J | 20.0 | 3.34 | mg/kg | 106 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 106 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 107 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 105 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.36 | J | 10.0 | 0.220 | mg/kg | 104 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Zinc | 0.956 | J | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141470637002A | Sample number(s): 7476638-7476640 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 113 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 115 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 108 | | 80-120 | | |
| Batch number: 141470637002B | Sample number(s): 7476638-7476640 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 112 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141480638002 | Sample number(s): 7476638-7476640 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 85 | | 85-120 | | |
| Batch number: 14144039402A | Sample number(s): 7476638-7476640 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14147162401B | Sample number(s): 7476638-7476640 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14153005 | Sample number(s): 7476638-7476640 | | | | | | | | |
| 2378-TCDD | 0.0448 J | 1.00 | 0.0438 | ng/kg | 105 | | 67-158 | | |
| 12378-PeCDD | 0.0540 J | 5.00 | 0.0302 | ng/kg | 98 | | 70-142 | | |
| 123478-HxCDD | 0.0830 J | 5.00 | 0.0221 | ng/kg | 94 | | 70-164 | | |
| 123678-HxCDD | 0.0643 J | 5.00 | 0.0226 | ng/kg | 95 | | 76-134 | | |
| 123789-HxCDD | 0.0684 J | 5.00 | 0.0211 | ng/kg | 93 | | 64-162 | | |
| 1234678-HpCDD | 0.0893 J | 5.00 | 0.0218 | ng/kg | 92 | | 70-140 | | |
| OCDD | 0.452 J | 10.0 | 0.0279 | ng/kg | 88 | | 78-144 | | |
| 2378-TCDF | 0.0491 J | 1.00 | 0.0294 | ng/kg | 104 | | 75-158 | | |
| 12378-PeCDF | 0.103 J | 5.00 | 0.0131 | ng/kg | 95 | | 80-134 | | |
| 23478-PeCDF | 0.105 J | 5.00 | 0.0135 | ng/kg | 96 | | 68-160 | | |
| 123478-HxCDF | 0.0629 J | 5.00 | 0.0176 | ng/kg | 93 | | 72-134 | | |
| 123678-HxCDF | 0.0439 J | 5.00 | 0.0167 | ng/kg | 93 | | 84-130 | | |
| 123789-HxCDF | 0.0800 J | 5.00 | 0.0195 | ng/kg | 92 | | 78-130 | | |
| 234678-HxCDF | 0.0522 J | 5.00 | 0.0168 | ng/kg | 94 | | 70-156 | | |
| 1234678-HpCDF | 0.0727 J | 5.00 | 0.00876 | ng/kg | 91 | | 82-122 | | |
| 1234789-HpCDF | 0.0705 J | 5.00 | 0.0145 | ng/kg | 92 | | 78-138 | | |
| OCDF | 0.182 J | 10.0 | 0.0366 | ng/kg | 89 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0529 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155SLA026 | Sample number(s): 7476638-7476640 UNSPK: P475537 | | | | | | | | |
| Acenaphthene | 109 | 109 | 48-127 | 1 | 30 | | | | |
| Acenaphthylene | 101 | 101 | 60-128 | 0 | 30 | | | | |
| Anthracene | 105 | 102 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 94 | 94 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 84 | 84 | 49-137 | 0 | 30 | | | | |
| Benzo(b)fluoranthene | 94 | 93 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 76 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 96 | 95 | 33-141 | 1 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | 81 | 81 | 49-144 | 0 | 30 | | | | |
| Butylbenzylphthalate | 98 | 97 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 98 | 99 | 52-147 | 0 | 30 | | | | |
| Chrysene | 89 | 89 | 43-141 | 0 | 30 | | | | |
| Dibenz(a,h)anthracene | 101 | 102 | 25-145 | 0 | 30 | | | | |
| Diethylphthalate | 90 | 91 | 66-140 | 0 | 30 | | | | |
| Dimethylphthalate | 82 | 80 | 70-123 | 3 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 101 | 99 | 48-164 | 2 | 30 | | | | |
| Fluoranthene | 96 | 96 | 38-153 | 0 | 30 | | | | |
| Fluorene | 97 | 96 | 57-130 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 96 | 95 | 26-139 | 1 | 30 | | | | |
| 1-Methylnaphthalene | 94 | 93 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 99 | 99 | 46-147 | 0 | 30 | | | | |
| Naphthalene | 96 | 94 | 52-136 | 2 | 30 | | | | |
| N-Nitrosodimethylamine | 86 | 87 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 100 | 100 | 52-162 | 0 | 30 | | | | |
| Phenanthrene | 99 | 97 | 50-137 | 2 | 30 | | | | |
| Pyrene | 83 | 83 | 26-143 | 0 | 30 | | | | |
| Batch number: 14147C16A | Sample number(s): 7476639-7476640 UNSPK: P475537 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 74 | 87 | 69-123 | 21 | 30 | | | | |
| Batch number: 141500023A | Sample number(s): 7476638-7476640 UNSPK: P476634 | | | | | | | | |
| PCB-1016 | 95 | 96 | 41-135 | 1 | 50 | | | | |
| PCB-1260 | 94 | 99 | 40-134 | 5 | 50 | | | | |
| Batch number: 141470033A | Sample number(s): 7476638-7476640 UNSPK: P475537 | | | | | | | | |
| EFH (C12-C14) | 82 | 91 | 49-123 | 9 | 20 | | | | |
| EFH (C15-C20) | 85 | 95 | 49-123 | 9 | 20 | | | | |
| EFH (C21-C30) | 86 | 96 | 49-123 | 10 | 20 | | | | |
| EFH (C30-C40) | 69 | 74 | 49-123 | 6 | 20 | | | | |
| EFH (C8-C11) | 73 | 83 | 49-123 | 12 | 20 | | | | |
| Batch number: 141470034A | Sample number(s): 7476638-7476640 UNSPK: P475537 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 72 | 81 | 49-123 | 11 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 74 | 83 | 49-123 | 10 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 75 | 84 | 49-123 | 10 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 68 | 75 | 49-123 | 8 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 56 | 65 | 49-123 | 15 | 20 | | | | |
| Batch number: 141470637002 | Sample number(s): 7476638-7476640 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Aluminum | 372 (2) | 821 (2) | 75-125 | 6 | 20 | 15,100 | 13,200 | 13 | 20 |
| Antimony | 52* | 51* | 75-125 | 2 | 20 | 4.00 U | 4.00 U | 0 (1) | 20 |
| Arsenic | 96 | 96 | 75-125 | 2 | 20 | 4.11 | 3.09 J | 28* (1) | 20 |
| Barium | 35* | 37* | 75-125 | 2 | 20 | 230 | 94.1 | 84* | 20 |
| Beryllium | 101 | 102 | 75-125 | 3 | 20 | 0.562 J | 0.486 J | 15 (1) | 20 |
| Boron | 98 | 98 | 75-125 | 3 | 20 | 6.78 J | 4.93 J | 32* (1) | 20 |
| Cadmium | 97 | 97 | 75-125 | 3 | 20 | 0.549 J | 0.491 J | 11 (1) | 20 |
| Calcium | 149 (2) | 103 (2) | 75-125 | 5 | 20 | 2,920 | 2,520 | 15 | 20 |
| Chromium | 81 | 89 | 75-125 | 5 | 20 | 20.4 | 16.4 | 22* | 20 |
| Cobalt | 96 | 97 | 75-125 | 4 | 20 | 5.22 | 5.04 | 4 | 20 |
| Copper | 102 | 105 | 75-125 | 4 | 20 | 10.3 | 8.93 | 14 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Iron | -2173 (2) | -1295 (2) | 75-125 | 5 | 20 | 18,600 | 17,400 | 7 | 20 |
| Lead | 98 | 93 | 75-125 | 2 | 20 | 6.89 | 5.48 | 23* (1) | 20 |
| Lithium | 99 | 101 | 75-125 | 4 | 20 | 21.7 | 20.3 | 7 | 20 |
| Magnesium | -196 (2) | -75 (2) | 75-125 | 6 | 20 | 4,220 | 3,840 | 9 | 20 |
| Manganese | 156 (2) | 119 (2) | 75-125 | 5 | 20 | 291 | 294 | 1 | 20 |
| Molybdenum | 95 | 96 | 75-125 | 3 | 20 | 0.441 J | 0.329 J | 29* (1) | 20 |
| Nickel | 96 | 97 | 75-125 | 4 | 20 | 11.0 | 10.8 | 3 | 20 |
| Phosphorus | 106 | 38* | 75-125 | 15 | 20 | 372 | 354 | 5 | 20 |
| Potassium | 108 | 109 | 75-125 | 1 | 20 | 3,220 | 3,070 | 5 | 20 |
| Sodium | 95 | 96 | 75-125 | 4 | 20 | 111 | 102 | 8 (1) | 20 |
| Tin | 90 | 90 | 75-125 | 3 | 20 | 2.39 J | 2.23 J | 7 (1) | 20 |
| Titanium | 150 (2) | 258 (2) | 75-125 | 9 | 20 | 1,070 | 994 | 8 | 20 |
| Vanadium | 97 | 102 | 75-125 | 5 | 20 | 34.9 | 30.6 | 13 | 20 |
| Zinc | 93 | 89 | 75-125 | 1 | 20 | 56.3 | 52.0 | 8 | 20 |
| Zirconium | 98 | 98 | 75-125 | 4 | 20 | 3.99 J | 4.08 J | 2 (1) | 20 |
| Batch number: 141470637002A | Sample number(s): 7476638-7476640 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Silver | 105 | 102 | 75-125 | 0 | 20 | 0.0276 J | 0.0297 J | 8 (1) | 20 |
| Strontium | 106 | 92 | 75-125 | 3 | 20 | 22.8 | 19.7 | 15 | 20 |
| Thallium | 120 | 112 | 75-125 | 2 | 20 | 0.256 | 0.252 | 1 (1) | 20 |
| Batch number: 141470637002B | Sample number(s): 7476638-7476640 UNSPK: P471505 BKG: P471505 | | | | | | | | |
| Selenium | 99 | 99 | 75-125 | 3 | 20 | 0.137 J | 0.118 J | 15 (1) | 20 |
| Batch number: 141480638002 | Sample number(s): 7476638-7476640 UNSPK: P475537 BKG: P475537 | | | | | | | | |
| 3a Mercury 7471A | 91 | 92 | 65-135 | 2 | 20 | 0.0111 J | 0.0105 J | 6 (1) | 20 |
| Batch number: 14144039402A | Sample number(s): 7476638-7476640 BKG: P476634 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.45 | 7.48 | 0 | 3 |
| Batch number: 14147162401B | Sample number(s): 7476638-7476640 BKG: P473396 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 12.9 | 13.8 | 6 | 20 |
| Batch number: 14153005 | Sample number(s): 7476638-7476640 UNSPK: P475537 | | | | | | | | |
| 2378-TCDD | 102 | 103 | 40-135 | 1 | 20 | | | | |
| 12378-PeCDD | 101 | 101 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 96 | 95 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDD | 95 | 97 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 96 | 96 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDD | 80 | 84 | 40-135 | 4 | 20 | | | | |
| OCDD | -15* | -4* | 40-135 | 9 | 20 | | | | |
| 2378-TCDF | 106 | 105 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDF | 96 | 95 | 40-135 | 3 | 20 | | | | |
| 23478-PeCDF | 97 | 98 | 40-135 | 0 | 20 | | | | |
| 123478-HxCDF | 92 | 94 | 40-135 | 1 | 20 | | | | |
| 123678-HxCDF | 94 | 93 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 91 | 93 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 94 | 94 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 87 | 87 | 40-135 | 1 | 20 | | | | |
| 1234789-HpCDF | 91 | 92 | 40-135 | 0 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| OCDF | 87 | 89 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14155SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7476638 | 103 | 115 | 92 |
| 7476639 | 101 | 112 | 89 |
| 7476640 | 101 | 117 | 93 |
| Blank | 106 | 122* | 93 |
| LCS | 107 | 123* | 94 |
| MS | 98 | 114 | 91 |
| MSD | 98 | 114 | 92 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14147C16A

| | Trifluorotoluene-F |
|---|---|
| 7476639 | 99 |
| 7476640 | 84 |
| Blank | 90 |
| LCS | 86 |
| MS | 83 |
| MSD | 83 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14149A94A

| | Trifluorotoluene-F |
|---|---|
| 7476637 | 82 |
| Blank | 82 |
| LCS | 91 |
| LCSD | 90 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141500023A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

## Surrogate Quality Control

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7476638 | 104 | 94 |
| 7476639 | 96 | 88 |
| 7476640 | 111 | 101 |
| Blank | 115 | 102 |
| LCS | 111 | 101 |
| LCSD | 119 | 104 |
| MS | 107 | 101 |
| MSD | 108 | 105 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141470033A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7476638 | 77 | 87 |
| 7476639 | 85 | 104 |
| 7476640 | 78 | 86 |
| Blank | 79 | 90 |
| LCS | 75 | 88 |
| MS | 72 | 83 |
| MSD | 80 | 90 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141470034A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7476638 | 78 | 84 |
| 7476639 | 80 | 91 |
| 7476640 | 78 | 86 |
| Blank | 67 | 80 |
| LCS | 77 | 88 |
| MS | 68 | 75 |
| MSD | 77 | 83 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14153005

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7476638 | 90 | 92 | 84 | 88 | 88 | 83 |
| 7476639 | 78 | 84 | 81 | 81 | 81 | 78 |
| 7476640 | 81 | 85 | 86 | 87 | 87 | 84 |
| Blank | 91 | 95 | 90 | 91 | 92 | 82 |
| MS | 77 | 87 | 82 | 85 | 85 | 82 |
| MSD | 82 | 89 | 84 | 83 | 86 | 81 |
| OPR | 76 | 83 | 79 | 77 | 80 | 70 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1476958
Reported: 06/09/14 at 01:54 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| 7476638 | 71 | 94 | 96 | 90 | 77 | 86 |
| 7476639 | 68 | 78 | 90 | 77 | 66 | 79 |
| 7476640 | 76 | 80 | 90 | 80 | 70 | 83 |
| Blank | 69 | 97 | 103 | 98 | 84 | 91 |
| MS | 76 | 80 | 95 | 89 | 74 | 84 |
| MSD | 76 | 84 | 101 | 89 | 74 | 86 |
| OPR | 60 | 82 | 90 | 84 | 72 | 79 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7476638 | 79 | 79 | 88 | 66 | 55 |
| 7476639 | 68 | 60 | 94 | 51 | 41 |
| 7476640 | 73 | 69 | 98 | 58 | 50 |
| Blank | 86 | 83 | 99 | 67 | 55 |
| MS | 78 | 75 | 99 | 65 | 57 |
| MSD | 77 | 75 | 103 | 61 | 53 |
| OPR | 75 | 72 | 86 | 58 | 47 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/23/2014

CarrierName: FedEx

AirbillNo: ~~7700 8177 7065 SM82314~~
7700 8382 3163

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

A-13013
G-1476958
S-7476637-40

COC No: 20140523-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB3-052314 | 5/23/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-636-SA5A-TR-0.5 | 5/23/14 07:46 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | |
| SL-636-SA5A-TR-3.5 | 5/23/14 08:47 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | |
| SL-636-SA5A-TR-3.5 | 5/23/14 08:47 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-636-SA5A-TR-7.5 | 5/23/14 08:41 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | |
| SL-636-SA5A-TR-7.5 | 5/23/14 08:41 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/23/2014 | 1300 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/24/14 | 0930 |

TRENCHING

1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15546

Group Number(s): 1476958

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/24/2014 9:30 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 10:51 on 05/24/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 3.4 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/28/2014
Group Number: 1477505
SDG: PH200
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-546-SA5D-SB-5.0-6.0 Soil | 7479336 |
| SVL-550-SA5D-SB-5.0-6.0 Soil | 7479337 |
| TB2-052714 Water | 7479338 |
| SVL-532-SA5D-SB-4.0-4.5 Soil | 7479339 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SVL-546-SA5D-SB-5.0-6.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7479336**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 11:03 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5465D SDG#: PH200-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.89 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.89 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.89 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.89 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 21 | 0.89 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.89 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.89 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.89 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.89 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-546-SA5D-SB-5.0-6.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7479336**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 11:03 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5465D SDG#: PH200-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.89 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.89 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.89 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.89 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.89 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.89 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.89 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.89 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.89 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.89 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.89 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 13.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 00:53 | Andrea E Lando | 0.89 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:33 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-546-SA5D-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7479336**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 11:03 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5465D SDG#: PH200-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414834624 | 05/28/2014 16:33 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:23 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401A | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-550-SA5D-SB-5.0-6.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7479337**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 09:02 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5505D SDG#: PH200-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.91 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.91 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.91 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.91 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.91 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 20 | 0.91 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.91 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.91 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-550-SA5D-SB-5.0-6.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7479337**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 09:02 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5505D SDG#: PH200-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.91 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.91 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.91 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.91 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.91 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.91 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 11.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 01:16 | Andrea E Lando | 0.91 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:33 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-550-SA5D-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7479337**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 09:02 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5505D SDG#: PH200-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414834624 | 05/28/2014 16:33 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:25 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401A | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052714 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7479338**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:00

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB227 SDG#: PH200-03TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052714 Water**
**SSFL Phase 3 Subarea 5D**

**LL Sample # WW 7479338**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:00

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB227 SDG#: PH200-03TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141551AA | 06/04/2014 11:25 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141551AA | 06/04/2014 11:25 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-532-SA5D-SB-4.0-4.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7479339**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5325D SDG#: PH200-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.98 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.98 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.98 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.98 |
| 10237 | t-Butyl alcohol | 75-65-0 | 52 | U | 52 | 21 | 0.98 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.98 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5D-SB-4.0-4.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7479339**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5325D SDG#: PH200-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.98 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.98 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.98 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.98 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 01:38 | Andrea E Lando | 0.98 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:33 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-532-SA5D-SB-4.0-4.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7479339**
**LL Group # 1477505**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by VV

Submitted: 05/28/2014 11:15
Reported: 06/09/2014 15:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

5325D SDG#: PH200-04*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201414834624 | 05/28/2014 16:33 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:27 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401A | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477505
Reported: 06/09/14 at 03:18 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141562AA | Sample number(s): 7479336-7479337,7479339 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 99 | 100 | 41-149 | 1 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 81 | 94 | 50-137 | 15 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 96 | 91 | 58-123 | 6 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 97 | 99 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 102 | 100 | 80-120 | 2 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 2 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 106 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 75-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 101 | 102 | 70-126 | 1 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 100 | 94 | 32-162 | 5 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 92 | 93 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 100 | 107 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 72-120 | 0 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 104 | 101 | 69-120 | 3 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 75-120 | 0 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 104 | 96 | 63-128 | 8 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 104 | 102 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | 105 | 80-120 | 3 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 95 | 89 | 17-171 | 6 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 83 | 85 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 70-130 | 1 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 93 | 90 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 104 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 101 | 105 | 79-120 | 3 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 81 | 79 | 22-131 | 2 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 93 | 97 | 50-132 | 4 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 103 | 106 | 77-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 75-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 103 | 103 | 80-120 | 0 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 26-137 | 3 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 98 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 106 | 108 | 66-136 | 2 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 102 | 73-129 | 8 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 103 | 79-120 | 8 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 98 | 98 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 101 | 73-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477505
Reported: 06/09/14 at 03:18 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 103 | 104 | 77-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 96 | 74-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 101 | 100 | 69-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 95 | 98 | 59-134 | 3 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 2 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 102 | 95 | 64-137 | 7 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 96 | 100 | 46-130 | 5 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 90 | 91 | 40-129 | 1 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 68-128 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 98 | 101 | 69-120 | 3 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 110 | 105 | 72-130 | 5 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 104 | 101 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 92 | 93 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 115 | 103 | 80-124 | 11 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 105 | 104 | 76-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 102 | 71-123 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 117 | 119 | 78-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 64-120 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | 99 | 68-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 103 | 100 | 63-135 | 3 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | 104 | 80-120 | 3 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | 93 | 58-133 | 3 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 105 | 110 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 79-120 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 113 | 116 | 40-127 | 2 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 97 | 93 | 59-120 | 4 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 0 | 30 |
| Batch number: Y141551AA | Sample number(s): 7479338 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 89 | 88 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 76 | 76 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 94 | 94 | 62-120 | 0 | 30 |
| t-Amyl methyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 75-120 | 2 | 30 |
| Benzene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 78-120 | 2 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 95 | 97 | 80-120 | 3 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 95 | 96 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 73-120 | 1 | 30 |
| Bromoform | 4 | U | 4. | 0.5 | ug/l | 89 | 87 | 61-120 | 2 | 30 |
| Bromomethane | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 54-133 | 2 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 96 | 95 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 88 | 90 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 73-120 | 2 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 89 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 | U | 1. | 0.5 | ug/l | 101 | 104 | 74-130 | 2 | 30 |
| Chlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 80-120 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477505
Reported: 06/09/14 at 03:18 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 1 | U | 1. | 0.5 | ug/l | 90 | 93 | 56-120 | 3 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 101 | 103 | 54-126 | 2 | 30 |
| Chloroform | 1 | U | 1. | 0.5 | ug/l | 98 | 100 | 80-122 | 3 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 96 | 99 | 80-120 | 3 | 30 |
| Chloromethane | 1 | U | 1. | 0.5 | ug/l | 103 | 106 | 63-120 | 3 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 90 | 93 | 80-120 | 3 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 89 | 93 | 80-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 71 | 69 | 47-120 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 85 | 85 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 | U | 1. | 0.5 | ug/l | 95 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 | U | 1. | 0.5 | ug/l | 97 | 97 | 76-120 | 0 | 30 |
| Dibromomethane | 1 | U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 48-132 | 3 | 30 |
| 1,1-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 94 | 80-120 | 3 | 30 |
| 1,2-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 65-135 | 1 | 30 |
| 1,1-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 109 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |
| trans-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 113 | 80-120 | 4 | 30 |
| 1,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 87 | 91 | 80-120 | 4 | 30 |
| 1,3-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 90 | 90 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 99 | 99 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 98 | 102 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 91 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 91 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 97 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 104 | 101 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 89 | 92 | 51-125 | 3 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 84 | 86 | 44-126 | 2 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 89 | 92 | 65-120 | 3 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 89 | 92 | 80-120 | 3 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 108 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 104 | 105 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 51-124 | 3 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 106 | 107 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 90 | 92 | 80-120 | 3 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 86 | 87 | 70-120 | 2 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 91 | 91 | 58-126 | 0 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 66-126 | 3 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 92 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 102 | 102 | 65-130 | 0 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 91 | 94 | 76-120 | 3 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 3 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 73 | 56-135 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477505
Reported: 06/09/14 at 03:18 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 63-120 | 1 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 80-120 | 2 | 30 |
| Batch number: 14154162401A | Sample number(s): 7479336-7479337,7479339 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14154162401A | Sample number(s): 7479336-7479337,7479339 | | | | | BKG: 7479336 | | | |
| 14a Moisture Content by 160.3 | | | | | | 13.1 | 13.1 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141562AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7479336 | 106 | 106 | 99 | 93 |
| 7479337 | 106 | 104 | 98 | 95 |
| 7479339 | 103 | 99 | 100 | 93 |
| Blank | 102 | 104 | 100 | 95 |
| LCS | 102 | 104 | 104 | 100 |
| LCSD | 101 | 100 | 103 | 101 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141551AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7479338 | 101 | 100 | 96 | 95 |
| Blank | 101 | 100 | 96 | 95 |
| LCS | 101 | 98 | 98 | 99 |
| LCSD | 100 | 101 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/27/2014

CarrierName: FedEx

AirbillNo: 770107894616

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

A-13013 G-1477505 S-7479336-39

COC No: 20140527-02

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-546-SA5D-SB-5.0-6.0 | 5/27/14 11:03 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | soil moisture |
| SVL-546-SA5D-SB-5.0-6.0 | 5/27/14 11:03 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-550-SA5D-SB-5.0-6.0 | 5/27/14 09:02 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | soil moisture |
| SVL-550-SA5D-SB-5.0-6.0 | 5/27/14 09:02 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| TB2-052714 | 5/27/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SVL-532-SA5D-SB-4.0-4.5 | 5/27/14 13:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | soil moisture |
| SVL-532-SA5D-SB-4.0-4.5 | 5/27/14 13:15 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Van Vathanasin

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/27/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5.28.14 | 1115 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15723

Group Number(s): 1477505

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/28/2014 11:15 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 12:23 on 05/28/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.3 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 4.6 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 10, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/28/2014
Group Number: 1477510
SDG: PH201
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-707-SA5B-TR-0.5 Soil | 7479354 |
| SL-707-SA5B-TR-3.0 Soil | 7479355 |
| TB3-052714 Water | 7479356 |
| SL-693-SA5B-TR-0.5 Soil | 7479357 |
| SL-693-SA5B-TR-3.5 Soil | 7479358 |
| SL-693-SA5B-TR-5.0 Soil | 7479359 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-707-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479354**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:13 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70705 SDG#: PH201-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.71 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.5 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.9 | | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.92 | J | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | J | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.4 | J | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.2 | | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.0 | | 1.7 | 0.67 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.0 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.4 | J | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 550 | | 86 | 17 | 50 |
| 10590 | p,p-DDT | 50-29-3 | 45 | J | 86 | 18 | 50 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.0 | | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 0.56 | J | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 0.92 | J | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.17 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479354**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:13 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70705 SDG#: PH201-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 33 | U | 33 | 14 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 20 | | 10 | 4.0 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.0 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,600 | | 39.3 | 7.09 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.93 | U | 3.93 | 0.727 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.40 | | 3.93 | 0.688 | 1 |
| 06946 | Barium | 7440-39-3 | 126 | | 0.983 | 0.0324 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.825 | J | 0.983 | 0.0658 | 1 |
| 07914 | Boron | 7440-42-8 | 5.48 | J | 9.83 | 0.825 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.240 | J | 0.983 | 0.0747 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,120 | | 19.7 | 3.28 | 1 |
| 06951 | Chromium | 7440-47-3 | 23.7 | | 2.95 | 0.157 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.28 | | 0.983 | 0.0973 | 1 |
| 06953 | Copper | 7440-50-8 | 13.8 | | 1.97 | 0.285 | 1 |
| 01654 | Iron | 7439-89-6 | 24,600 | | 39.3 | 3.56 | 1 |
| 06955 | Lead | 7439-92-1 | 9.32 | | 2.95 | 0.491 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.0 | | 3.9 | 0.33 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,370 | | 9.83 | 1.64 | 1 |
| 06958 | Manganese | 7439-96-5 | 370 | | 0.983 | 0.0816 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479354**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:13 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70705 SDG#: PH201-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06960 | Molybdenum | 7439-98-7 | 0.457 | J | 1.97 | 0.167 | 1 |
| 06961 | Nickel | 7440-02-0 | 13.7 | | 1.97 | 0.128 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 620 | | 9.83 | 2.84 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,720 | | 98.3 | 8.20 | 1 |
| 01667 | Sodium | 7440-23-5 | 97.2 | J | 98.3 | 16.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.96 | J | 9.83 | 0.216 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,270 | | 0.983 | 0.167 | 1 |
| 06971 | Vanadium | 7440-62-2 | 41.5 | | 0.983 | 0.128 | 1 |
| 06972 | Zinc | 7440-66-6 | 73.7 | | 3.93 | 0.197 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.75 | J | 4.91 | 0.825 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.274 | J | 0.393 | 0.0983 | 2 |
| 06142 | Silver | 7440-22-4 | 0.308 | | 0.197 | 0.0255 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.1 | | 0.393 | 0.0668 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.262 | | 0.197 | 0.0295 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0163 | U | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.46 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-707-SA5B-TR-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7479354**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:13 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70705 SDG#: PH201-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.179 | J | 0.998 | 0.0582 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 1.88 | J | 4.99 | 0.0851 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 3.45 | JB | 4.99 | 0.101 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 10.3 | | 4.99 | 0.101 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 6.81 | | 4.99 | 0.105 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 329 | B | 4.99 | 0.156 | 1 |
| 11031 | OCDD | 3268-87-9 | 3,060 | B | 9.98 | 0.113 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.101 | JQ | 0.998 | 0.0873 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.381 | JB | 4.99 | 0.0438 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.580 | JBQ | 4.99 | 0.0435 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 2.09 | JB | 4.99 | 0.121 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 1.66 | JB | 4.99 | 0.103 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.839 | JB | 4.99 | 0.115 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 2.32 | JB | 4.99 | 0.106 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 70.4 | B | 4.99 | 0.0522 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 3.83 | JB | 4.99 | 0.102 | 1 |
| 11031 | OCDF | 39001-02-0 | 250 | B | 9.98 | 0.0730 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 9.84 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 59 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 76 | 28 - 130 |
| 13C12-123789-HxCDD | 71 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 51 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 95 | 28 - 143 |
| 13C12-1234789-HpCDF | 58 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479354**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:13 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70705 SDG#: PH201-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479354**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:13 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70705 SDG#: PH201-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 05:43 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 06:51 | Jamie L Brillhart | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 07:05 | Jamie L Brillhart | 50 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 01:06 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 02:28 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 17:32 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14154001 | 06/05/2014 13:47 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14154001 | 06/03/2014 12:15 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479354**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:13 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70705 SDG#: PH201-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:30 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:30 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:10 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:51 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:51 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:51 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:51 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638002 | 06/04/2014 21:09 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638002 | 06/04/2014 09:30 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14148039403A | 05/28/2014 22:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162402A | 06/03/2014 19:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-707-SA5B-TR-3.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7479355**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:55 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70730 SDG#: PH201-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.0 | J | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.3 | J | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 26.15 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 10 | | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.1 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-707-SA5B-TR-3.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7479355**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:55 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70730 SDG#: PH201-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.2 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 23,000 | | 39.9 | 7.19 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.99 | U | 3.99 | 0.738 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.04 | | 3.99 | 0.698 | 1 |
| 06946 | Barium | 7440-39-3 | 112 | | 0.997 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.987 | J | 0.997 | 0.0668 | 1 |
| 07914 | Boron | 7440-42-8 | 5.41 | J | 9.97 | 0.838 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.128 | J | 0.997 | 0.0758 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,910 | | 19.9 | 3.33 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.0 | | 2.99 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.33 | | 0.997 | 0.0987 | 1 |
| 06953 | Copper | 7440-50-8 | 12.4 | | 1.99 | 0.289 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479355**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:55 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70730 SDG#: PH201-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01654 | Iron | 7439-89-6 | 26,000 | | 39.9 | 3.61 | 1 |
| 06955 | Lead | 7439-92-1 | 6.52 | | 2.99 | 0.499 | 1 |
| 01656 | Lithium | 7439-93-2 | 30.3 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,810 | | 9.97 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 364 | | 0.997 | 0.0828 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.352 | J | 1.99 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.3 | | 1.99 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 482 | | 9.97 | 2.88 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,250 | | 99.7 | 8.32 | 1 |
| 01667 | Sodium | 7440-23-5 | 123 | | 99.7 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.08 | J | 9.97 | 0.219 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,350 | | 0.997 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 48.7 | | 0.997 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 61.4 | | 3.99 | 0.199 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.29 | J | 4.99 | 0.838 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.272 | J | 0.399 | 0.0997 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0347 | J | 0.199 | 0.0259 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.1 | | 0.399 | 0.0678 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.278 | | 0.199 | 0.0299 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0171 | U | 0.0171 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.58 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-707-SA5B-TR-3.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7479355**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:55 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70730 SDG#: PH201-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0385 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.09 | U | 5.09 | 0.0304 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.111 | JBQ | 5.09 | 0.0428 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.389 | J | 5.09 | 0.0435 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.313 | J | 5.09 | 0.0425 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 11.1 | B | 5.09 | 0.0464 | 1 |
| 11031 | OCDD | 3268-87-9 | 112 | B | 10.2 | 0.0450 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 | U | 1.02 | 0.0333 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0652 | JB | 5.09 | 0.0166 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0696 | JBQ | 5.09 | 0.0172 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.134 | JBQ | 5.09 | 0.0438 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0699 | JBQ | 5.09 | 0.0366 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0833 | JBQ | 5.09 | 0.0410 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.134 | JBQ | 5.09 | 0.0398 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.55 | JB | 5.09 | 0.0208 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.196 | JBQ | 5.09 | 0.0423 | 1 |
| 11031 | OCDF | 39001-02-0 | 9.89 | JB | 10.2 | 0.0389 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.245 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 78 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 58 | 24 - 169 |
| 13C12-12378-PeCDF | 77 | 24 - 185 |
| 13C12-23478-PeCDF | 70 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479355**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:55 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70730 SDG#: PH201-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479355**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:55 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70730 SDG#: PH201-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 07:18 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/03/2014 20:29 | Laura M Krieger | 26.15 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:20 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414834624 | 05/28/2014 16:21 | Lisa J Cooke | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 07:18 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 01:25 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 00:39 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 18:38 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14154001 | 06/05/2014 14:44 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14154001 | 06/03/2014 12:15 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-707-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479355**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:55 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

70730 SDG#: PH201-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:34 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:34 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:21 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 14:58 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:58 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:58 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 14:58 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638002 | 06/04/2014 21:11 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638002 | 06/04/2014 09:30 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14148039403A | 05/28/2014 22:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162402A | 06/03/2014 19:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB3-052714 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7479356**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 08:00

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB327 SDG#: PH201-03TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14150B94A | 06/03/2014 10:43 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14150B94A | 06/03/2014 10:43 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479357**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 10:17 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69305 SDG#: PH201-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.0 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.3 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.73 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.81 | J | 1.7 | 0.68 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.40 | J | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479357**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 10:17 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69305 SDG#: PH201-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.8 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,300 | | 39.9 | 7.20 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.99 | U | 3.99 | 0.739 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.03 | | 3.99 | 0.699 | 1 |
| 06946 | Barium | 7440-39-3 | 137 | | 0.998 | 0.0329 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.909 | J | 0.998 | 0.0669 | 1 |
| 07914 | Boron | 7440-42-8 | 5.59 | J | 9.98 | 0.839 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.324 | J | 0.998 | 0.0759 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,950 | | 20.0 | 3.33 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.0 | | 3.00 | 0.160 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.41 | | 0.998 | 0.0988 | 1 |
| 06953 | Copper | 7440-50-8 | 14.5 | | 2.00 | 0.290 | 1 |
| 01654 | Iron | 7439-89-6 | 24,300 | | 39.9 | 3.61 | 1 |
| 06955 | Lead | 7439-92-1 | 7.53 | | 3.00 | 0.499 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.2 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,910 | | 9.98 | 1.67 | 1 |
| 06958 | Manganese | 7439-96-5 | 354 | | 0.998 | 0.0829 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479357**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 10:17 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69305 SDG#: PH201-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06960 | Molybdenum | 7439-98-7 | 0.427 | J | 2.00 | 0.170 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.8 | | 2.00 | 0.130 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 412 | | 9.98 | 2.89 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,350 | | 99.8 | 8.33 | 1 |
| 01667 | Sodium | 7440-23-5 | 93.0 | J | 99.8 | 16.7 | 1 |
| 06969 | Tin | 7440-31-5 | 3.12 | J | 9.98 | 0.220 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,300 | | 0.998 | 0.170 | 1 |
| 06971 | Vanadium | 7440-62-2 | 44.6 | | 0.998 | 0.130 | 1 |
| 06972 | Zinc | 7440-66-6 | 62.2 | | 3.99 | 0.200 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.24 | J | 4.99 | 0.839 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.389 | J | 0.399 | 0.0998 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0459 | J | 0.200 | 0.0260 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.9 | | 0.399 | 0.0679 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.340 | | 0.200 | 0.0300 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0163 | U | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.85 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.8 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479357**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 10:17 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69305 SDG#: PH201-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.991 | U | 0.991 | 0.0346 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.126 | JQ | 4.95 | 0.0357 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.137 | JB | 4.95 | 0.0499 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.572 | JQ | 4.95 | 0.0521 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.665 | J | 4.95 | 0.0492 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 10.7 | B | 4.95 | 0.0422 | 1 |
| 11031 | OCDD | 3268-87-9 | 120 | B | 9.91 | 0.0450 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.991 | U | 0.991 | 0.0405 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.243 | JB | 4.95 | 0.0199 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0787 | JBQ | 4.95 | 0.0206 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.100 | JBQ | 4.95 | 0.0539 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.190 | JB | 4.95 | 0.0452 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.450 | JBQ | 4.95 | 0.0518 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.157 | JBQ | 4.95 | 0.0464 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.17 | JB | 4.95 | 0.0249 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.200 | JB | 4.95 | 0.0485 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.75 | JB | 9.91 | 0.0356 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.275 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 78 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 72 | 17 - 157 |
| 13C12-2378-TCDF | 57 | 24 - 169 |
| 13C12-12378-PeCDF | 79 | 24 - 185 |
| 13C12-23478-PeCDF | 73 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 105 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479357**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 10:17 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69305 SDG#: PH201-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479357**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 10:17 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69305 SDG#: PH201-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 07:51 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 07:46 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 02:02 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 03:32 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 18:59 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14154001 | 06/05/2014 15:40 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14154001 | 06/03/2014 12:15 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479357**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 10:17 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69305 SDG#: PH201-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:39 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:39 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:25 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 15:00 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:00 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:00 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:00 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638002 | 06/04/2014 21:21 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638002 | 06/04/2014 09:30 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14148039403A | 05/28/2014 22:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162402A | 06/03/2014 19:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479358**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69335 SDG#: PH201-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 28.15 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479358**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69335 SDG#: PH201-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 25,200 | | 40.8 | 7.36 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.08 | U | 4.08 | 0.755 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.52 | | 4.08 | 0.715 | 1 |
| 06946 | Barium | 7440-39-3 | 136 | | 1.02 | 0.0337 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.17 | | 1.02 | 0.0684 | 1 |
| 07914 | Boron | 7440-42-8 | 6.43 | J | 10.2 | 0.858 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.178 | J | 1.02 | 0.0776 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,960 | | 20.4 | 3.41 | 1 |
| 06951 | Chromium | 7440-47-3 | 28.7 | | 3.06 | 0.163 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.69 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 11.6 | | 2.04 | 0.296 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479358**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69335 SDG#: PH201-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01654 | Iron | 7439-89-6 | 27,500 | | 40.8 | 3.70 | 1 |
| 06955 | Lead | 7439-92-1 | 7.66 | | 3.06 | 0.510 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.7 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,280 | | 10.2 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 357 | | 1.02 | 0.0847 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.388 | J | 2.04 | 0.174 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.8 | | 2.04 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 243 | | 10.2 | 2.95 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,810 | | 102 | 8.51 | 1 |
| 01667 | Sodium | 7440-23-5 | 125 | | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.28 | J | 10.2 | 0.225 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,380 | | 1.02 | 0.174 | 1 |
| 06971 | Vanadium | 7440-62-2 | 53.0 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 60.5 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.88 | J | 5.10 | 0.858 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.267 | J | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0610 | J | 0.204 | 0.0265 | 2 |
| 06144 | Strontium | 7440-24-6 | 24.1 | | 0.408 | 0.0694 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.280 | | 0.204 | 0.0306 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0163 | U | 0.0163 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.31 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479358**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69335 SDG#: PH201-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.02 | U | 1.02 | 0.0428 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.11 | U | 5.11 | 0.0377 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.11 | U | 5.11 | 0.0245 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0540 | JQ | 5.11 | 0.0251 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0802 | JQ | 5.11 | 0.0255 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.195 | JB | 5.11 | 0.0279 | 1 |
| 11031 | OCDD | 3268-87-9 | 1.70 | JB | 10.2 | 0.0395 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 | U | 1.02 | 0.0316 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 5.11 | U | 5.11 | 0.0178 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.11 | U | 5.11 | 0.0177 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0232 | JBQ | 5.11 | 0.0189 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0263 | JB | 5.11 | 0.0170 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0626 | JBQ | 5.11 | 0.0187 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.11 | U | 5.11 | 0.0177 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0703 | JBQ | 5.11 | 0.0151 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.11 | U | 5.11 | 0.0259 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.177 | JBQ | 10.2 | 0.0394 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00509 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 62 | 25 - 164 |
| 13C12-12378-PeCDD | 66 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 84 | 23 - 140 |
| 13C12-OCDD | 73 | 17 - 157 |
| 13C12-2378-TCDF | 56 | 24 - 169 |
| 13C12-12378-PeCDF | 69 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 79 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 60 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479358**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69335 SDG#: PH201-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479358**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by AR

Submitted: 05/28/2014 11:15
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3201 Jermantown Road
Suite 400
Fairfax VA 22030

69335 SDG#: PH201-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 08:23 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/03/2014 21:07 | Laura M Krieger | 28.15 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:19 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414834624 | 05/28/2014 16:19 | Lisa J Cooke | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 08:13 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 02:20 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 01:01 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 19:21 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14154001 | 06/05/2014 16:37 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14154001 | 06/03/2014 12:15 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:43 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479358**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:15 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69335 SDG#: PH201-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:43 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:43 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:29 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 15:03 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:03 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:03 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:03 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638002 | 06/04/2014 21:28 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638002 | 06/04/2014 09:30 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14148039403A | 05/28/2014 22:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162402A | 06/03/2014 19:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479359**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:40 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69350 SDG#: PH201-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.68 | J | 1.8 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.82 | J | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.71 | J | 1.8 | 0.71 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.52 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.58 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-693-SA5B-TR-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7479359**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:40 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69350 SDG#: PH201-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.0 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,400 | | 41.1 | 7.41 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.760 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.08 | | 4.11 | 0.719 | 1 |
| 06946 | Barium | 7440-39-3 | 111 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.898 | J | 1.03 | 0.0688 | 1 |
| 07914 | Boron | 7440-42-8 | 4.81 | J | 10.3 | 0.863 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.128 | J | 1.03 | 0.0781 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,840 | | 20.5 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.4 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.60 | | 1.03 | 0.102 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479359**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:40 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69350 SDG#: PH201-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06953 | Copper | 7440-50-8 | 10.8 | 2.05 | 0.298 | 1 |
| 01654 | Iron | 7439-89-6 | 23,000 | 41.1 | 3.72 | 1 |
| 06955 | Lead | 7439-92-1 | 6.95 | 3.08 | 0.514 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.5 | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,810 | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 287 | 1.03 | 0.0853 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.347 J | 2.05 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.2 | 2.05 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 269 | 10.3 | 2.97 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,840 | 103 | 8.57 | 1 |
| 01667 | Sodium | 7440-23-5 | 193 | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.97 J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,250 | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 42.9 | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 50.1 | 4.11 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.46 J | 5.14 | 0.863 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.273 J | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0448 J | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.0 | 0.411 | 0.0699 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.245 | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0165 U | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.51 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.1 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.5 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479359**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:40 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69350 SDG#: PH201-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0295 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0450 | JQ | 5.21 | 0.0272 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.21 | U | 5.21 | 0.0217 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.103 | J | 5.21 | 0.0223 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.178 | J | 5.21 | 0.0230 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.885 | JBQ | 5.21 | 0.0317 | 1 |
| 11031 | OCDD | 3268-87-9 | 7.98 | JB | 10.4 | 0.0224 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 | U | 1.04 | 0.0267 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.139 | JB | 5.21 | 0.0145 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0216 | JB | 5.21 | 0.0144 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0383 | JBQ | 5.21 | 0.0162 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0504 | JB | 5.21 | 0.0139 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.171 | JBQ | 5.21 | 0.0149 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0344 | JBQ | 5.21 | 0.0151 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.210 | JB | 5.21 | 0.0108 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0351 | JB | 5.21 | 0.0191 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.516 | JB | 10.4 | 0.0289 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0488 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 74 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 90 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 79 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 93 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 96 | 29 - 147 |
| 13C12-1234678-HpCDF | 110 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479359**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:40 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69350 SDG#: PH201-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479359**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:40 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69350 SDG#: PH201-06*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 08:55 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/03/2014 21:45 | Laura M Krieger | 22.52 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414834624 | 05/28/2014 16:18 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414834624 | 05/28/2014 16:18 | Lisa J Cooke | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 08:27 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141500023A | 06/03/2014 02:39 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141500023A | 05/31/2014 06:00 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 06:47 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 23:18 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14154001 | 06/05/2014 17:34 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14154001 | 06/03/2014 12:15 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7479359**
**LL Group # 1477510**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/27/2014 13:40 by AR

Submitted: 05/28/2014 11:15
Reported: 06/10/2014 08:58

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69350 SDG#: PH201-06*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:51 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 23:51 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141490637001 | 06/02/2014 10:33 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141490637001B | 06/02/2014 15:05 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:05 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:05 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141490637001A | 06/02/2014 15:05 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638002 | 06/04/2014 21:30 | Katlin N Cataldi | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141490637001 | 06/01/2014 22:20 | Annamaria Kuhns | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638002 | 06/04/2014 09:30 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14148039403A | 05/28/2014 22:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162402A | 06/03/2014 19:07 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14151SLE026 | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 79* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 81 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 86 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 80-119 | | |
| Batch number: 14150B94A | Sample number(s): 7479356 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 97 | 92 | 80-133 | 6 | 30 |
| Batch number: 14154A16A | Sample number(s): 7479355,7479358-7479359 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 141500023A | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 82 | 86 | 36-106 | 5 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 97 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 98 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141530004A | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 86 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 88 | | 55-135 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 89 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 56-138 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 100 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 89 | | 59-137 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 68-134 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 88 | | 56-128 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 85 | | 61-125 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 89 | | 69-126 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 89 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 94 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 100 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141540006A | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 87 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 60-115 | | |
| Batch number: 141540007A | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 66* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 54 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 54* | | 60-115 | | |
| Batch number: 141490637001 | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | | |
| Aluminum | 7.59 | J | 40.0 | 7.21 | mg/kg | 108 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 109 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 103 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 0.0890 | J | 1.00 | 0.0670 | mg/kg | 103 | | 80-120 | | |
| Boron | 1.60 | J | 10.0 | 0.840 | mg/kg | 101 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 103 | | 80-120 | | |
| Calcium | 21.3 | | 20.0 | 3.34 | mg/kg | 107 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 104 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 104 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 106 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 104 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 102 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Magnesium | 10.0 U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 U | 1.00 | 0.0830 | mg/kg | 103 | | 80-120 | | |
| Molybdenum | 2.00 U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 U | 2.00 | 0.130 | mg/kg | 107 | | 80-120 | | |
| Phosphorus | 10.0 U | 10.0 | 2.89 | mg/kg | 103 | | 80-120 | | |
| Potassium | 100 U | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.59 J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 U | 1.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Zinc | 4.00 U | 4.00 | 0.200 | mg/kg | 102 | | 80-120 | | |
| Zirconium | 5.00 U | 5.00 | 0.840 | mg/kg | 105 | | 80-120 | | |
| Batch number: 141490637001A | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0260 | mg/kg | 103 | | 80-120 | | |
| Strontium | 0.103 J | 0.400 | 0.0680 | mg/kg | 102 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141490637001B | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 141540638002 | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 92 | | 85-120 | | |
| Batch number: 14148039403A | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14154162402A | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14154001 | Sample number(s): 7479354-7479355,7479357-7479359 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0402 | ng/kg | 89 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0292 | ng/kg | 88 | | 70-142 | | |
| 123478-HxCDD | 0.0420 J | 5.00 | 0.0181 | ng/kg | 85 | | 70-164 | | |
| 123678-HxCDD | 5.00 U | 5.00 | 0.0184 | ng/kg | 86 | | 76-134 | | |
| 123789-HxCDD | 5.00 U | 5.00 | 0.0194 | ng/kg | 87 | | 64-162 | | |
| 1234678-HpCDD | 0.0576 J | 5.00 | 0.0182 | ng/kg | 86 | | 70-140 | | |
| OCDD | 0.308 J | 10.0 | 0.0241 | ng/kg | 83 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0347 | ng/kg | 88 | | 75-158 | | |
| 12378-PeCDF | 0.0470 J | 5.00 | 0.0150 | ng/kg | 86 | | 80-134 | | |
| 23478-PeCDF | 0.0155 J | 5.00 | 0.0148 | ng/kg | 88 | | 68-160 | | |
| 123478-HxCDF | 0.0223 J | 5.00 | 0.0157 | ng/kg | 89 | | 72-134 | | |
| 123678-HxCDF | 0.0187 J | 5.00 | 0.0136 | ng/kg | 89 | | 84-130 | | |
| 123789-HxCDF | 0.0558 J | 5.00 | 0.0151 | ng/kg | 96 | | 78-130 | | |
| 234678-HxCDF | 0.0179 J | 5.00 | 0.0146 | ng/kg | 87 | | 70-156 | | |
| 1234678-HpCDF | 0.0496 J | 5.00 | 0.00684 | ng/kg | 85 | | 82-122 | | |
| 1234789-HpCDF | 0.0536 J | 5.00 | 0.0133 | ng/kg | 86 | | 78-138 | | |
| OCDF | 0.159 J | 10.0 | 0.0343 | ng/kg | 86 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.000140 | | | ng/kg | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14151SLE026 | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: 7479354 | | | | | | | | |
| Acenaphthene | 97 | 96 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 100 | 100 | 60-128 | 0 | 30 | | | | |
| Anthracene | 93 | 94 | 52-126 | 0 | 30 | | | | |
| Benzo(a)anthracene | 101 | 99 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 83 | 82 | 49-137 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 88 | 90 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 77 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 77 | 74 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 84 | 86 | 49-144 | 2 | 30 | | | | |
| Butylbenzylphthalate | 105 | 104 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 106 | 103 | 52-147 | 3 | 30 | | | | |
| Chrysene | 91 | 94 | 43-141 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 85 | 85 | 25-145 | 1 | 30 | | | | |
| Diethylphthalate | 89 | 91 | 66-140 | 2 | 30 | | | | |
| Dimethylphthalate | 85 | 84 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 119 | 112 | 48-164 | 6 | 30 | | | | |
| Fluoranthene | 94 | 117 | 38-153 | 20 | 30 | | | | |
| Fluorene | 81 | 80 | 57-130 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 81 | 79 | 26-139 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 90 | 91 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 95 | 46-147 | 1 | 30 | | | | |
| Naphthalene | 89 | 89 | 52-136 | 0 | 30 | | | | |
| N-Nitrosodimethylamine | 84 | 84 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 106 | 105 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 104 | 125 | 50-137 | 17 | 30 | | | | |
| Pyrene | 86 | 97 | 26-143 | 12 | 30 | | | | |
| Batch number: 14154A16A | Sample number(s): 7479355,7479358-7479359 UNSPK: P483434 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 72 | 77 | 69-123 | 6 | 30 | | | | |
| Batch number: 141500023A | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: P476634 | | | | | | | | |
| PCB-1016 | 95 | 96 | 41-135 | 1 | 50 | | | | |
| PCB-1260 | 94 | 99 | 40-134 | 5 | 50 | | | | |
| Batch number: 141530004A | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: P483434 | | | | | | | | |
| Aldrin | 94 | 85 | 16-126 | 10 | 50 | | | | |
| Alpha BHC | 93 | 86 | 14-140 | 8 | 50 | | | | |
| Beta BHC | 95 | 86 | 42-133 | 9 | 50 | | | | |
| Gamma BHC - Lindane | 96 | 88 | 30-137 | 9 | 50 | | | | |
| p,p-DDD | 109 | 99 | 43-149 | 10 | 50 | | | | |
| p,p-DDE | 112 | 103 | 35-152 | 9 | 50 | | | | |
| p,p-DDT | 107 | 98 | 12-193 | 9 | 50 | | | | |
| Delta BHC | 98 | 90 | 13-153 | 9 | 50 | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Dieldrin | 100 | 88 | 41-153 | 12 | 50 | | | | |
| Endosulfan I | 91 | 83 | 26-146 | 9 | 50 | | | | |
| Endosulfan II | 96 | 88 | 34-141 | 9 | 50 | | | | |
| Endosulfan Sulfate | 96 | 89 | 10-181 | 7 | 50 | | | | |
| Endrin | 98 | 90 | 30-152 | 9 | 50 | | | | |
| Endrin Aldehyde | 88 | 82 | 23-138 | 6 | 50 | | | | |
| Endrin Ketone | 92 | 85 | 30-148 | 8 | 50 | | | | |
| Heptachlor | 95 | 87 | 16-152 | 9 | 50 | | | | |
| Heptachlor Epoxide | 99 | 90 | 33-144 | 10 | 50 | | | | |
| Methoxychlor | 106 | 97 | 41-161 | 8 | 50 | | | | |
| Batch number: 141540006A | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: 7479354 | | | | | | | | |
| EFH (C12-C14) | 88 | 89 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 106 | 107 | 49-123 | 2 | 20 | | | | |
| EFH (C21-C30) | 77 | 81 | 49-123 | 2 | 20 | | | | |
| EFH (C30-C40) | 73 | 79 | 49-123 | 3 | 20 | | | | |
| EFH (C8-C11) | 85 | 83 | 49-123 | 2 | 20 | | | | |
| Batch number: 141540007A | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: 7479354 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 61 | 70 | 49-123 | 13 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 63 | 71 | 49-123 | 13 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 68 | 77 | 49-123 | 12 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 65 | 74 | 49-123 | 12 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 50 | 58 | 49-123 | 16 | 20 | | | | |
| Batch number: 141490637001 | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: P475537 BKG: P475537 | | | | | | | | |
| Aluminum | 2418 (2) | 2734 (2) | 75-125 | 3 | 20 | 17,700 | 17,800 | 1 | 20 |
| Antimony | 77 | 80 | 75-125 | 3 | 20 | 3.88 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 101 | 103 | 75-125 | 1 | 20 | 3.89 | 4.13 | 6 (1) | 20 |
| Barium | 103 | 103 | 75-125 | 0 | 20 | 84.5 | 86.5 | 2 | 20 |
| Beryllium | 102 | 101 | 75-125 | 1 | 20 | 0.751 J | 0.776 J | 3 (1) | 20 |
| Boron | 98 | 98 | 75-125 | 0 | 20 | 5.99 J | 6.29 J | 5 (1) | 20 |
| Cadmium | 96 | 98 | 75-125 | 2 | 20 | 0.174 J | 0.126 J | 32* (1) | 20 |
| Calcium | 163 (2) | 192 (2) | 75-125 | 4 | 20 | 2,300 | 2,380 | 3 | 20 |
| Chromium | 112 | 124 | 75-125 | 6 | 20 | 17.9 | 18.2 | 1 | 20 |
| Cobalt | 96 | 95 | 75-125 | 1 | 20 | 4.22 | 8.65 | 69* (1) | 20 |
| Copper | 107 | 137* | 75-125 | 20 | 20 | 7.17 | 7.48 | 4 (1) | 20 |
| Iron | 672 (2) | 1158 (2) | 75-125 | 2 | 20 | 20,600 | 20,000 | 3 | 20 |
| Lead | 97 | 109 | 75-125 | 9 | 20 | 4.90 | 5.26 | 7 (1) | 20 |
| Lithium | 106 | 104 | 75-125 | 2 | 20 | 23.7 | 23.7 | 0 | 20 |
| Magnesium | 299 (2) | 377 (2) | 75-125 | 3 | 20 | 3,780 | 3,910 | 3 | 20 |
| Manganese | 129 (2) | 134 (2) | 75-125 | 1 | 20 | 234 | 273 | 15 | 20 |
| Molybdenum | 96 | 95 | 75-125 | 1 | 20 | 0.539 J | 0.384 J | 33* (1) | 20 |
| Nickel | 101 | 100 | 75-125 | 1 | 20 | 9.62 | 9.91 | 3 (1) | 20 |
| Phosphorus | 104 | 159* | 75-125 | 16 | 20 | 203 | 212 | 4 | 20 |
| Potassium | 139* | 128* | 75-125 | 3 | 20 | 1,970 | 2,030 | 3 | 20 |
| Sodium | 105 | 101 | 75-125 | 4 | 20 | 132 | 138 | 5 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 1 | 20 | 2.72 J | 2.85 J | 5 (1) | 20 |
| Titanium | 297 (2) | 399 (2) | 75-125 | 7 | 20 | 1,020 | 1,030 | 0 | 20 |
| Vanadium | 109 | 114 | 75-125 | 3 | 20 | 35.9 | 36.1 | 1 | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Zinc | 100 | 142* | 75-125 | 21* | 20 | 41.2 | | 41.8 | | 1 | 20 |
| Zirconium | 97 | 97 | 75-125 | 0 | 20 | 3.97 | J | 4.80 | J | 19 (1) | 20 |
| Batch number: 141490637001A | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: P475537 BKG: P475537 | | | | | | | | | | |
| Silver | 103 | 103 | 75-125 | 1 | 20 | 0.0377 | J | 0.0369 | J | 2 (1) | 20 |
| Strontium | 128* | 118 | 75-125 | 3 | 20 | 19.2 | | 19.4 | | 1 | 20 |
| Thallium | 100 | 104 | 75-125 | 2 | 20 | 0.217 | | 0.213 | | 2 (1) | 20 |
| Batch number: 141490637001B | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: P475537 BKG: P475537 | | | | | | | | | | |
| Selenium | 102 | 102 | 75-125 | 0 | 20 | 0.188 | J | 0.184 | J | 2 (1) | 20 |
| Batch number: 141540638002 | Sample number(s): 7479354-7479355,7479357-7479359 UNSPK: 7479355 BKG: 7479355 | | | | | | | | | | |
| 3a Mercury 7471A | 93 | 98 | 65-135 | 6 | 20 | 0.0165 | U | 0.0154 | U | 0 (1) | 20 |
| Batch number: 14148039403A | Sample number(s): 7479354-7479355,7479357-7479359 BKG: 7479354 | | | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.46 | | 6.48 | | 0 | 3 |
| Batch number: 14154162402A | Sample number(s): 7479354-7479355,7479357-7479359 BKG: 7479357 | | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 1.8 | | 1.8 | | 2 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14151SLE026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7479354 | 89 | 94 | 82 |
| 7479355 | 95 | 106 | 83 |
| 7479357 | 95 | 109 | 85 |
| 7479358 | 92 | 110 | 84 |
| 7479359 | 95 | 108 | 86 |
| Blank | 99 | 106 | 89 |
| LCS | 103 | 119* | 89 |
| MS | 96 | 106 | 88 |
| MSD | 99 | 107 | 87 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14150B94A

| | Trifluorotoluene-F |
|---|---|
| 7479356 | 81 |
| Blank | 81 |
| LCS | 91 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

## Surrogate Quality Control

LCSD 85

Limits: 63-135

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14154A16A

| | Trifluorotoluene-F |
|---|---|
| 7479355 | 100 |
| 7479358 | 104 |
| 7479359 | 89 |
| Blank | 90 |
| LCS | 96 |
| MS | 83 |
| MSD | 87 |
| Limits: | 50-142 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141500023A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7479354 | 108 | 98 |
| 7479355 | 107 | 99 |
| 7479357 | 99 | 96 |
| 7479358 | 104 | 98 |
| 7479359 | 110 | 99 |
| Blank | 115 | 102 |
| LCS | 111 | 101 |
| LCSD | 119 | 104 |
| MS | 107 | 101 |
| MSD | 108 | 105 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141530004A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7479354 | 91 | 111 |
| 7479355 | 82 | 93 |
| 7479357 | 96 | 94 |
| 7479358 | 81 | 87 |
| 7479359 | 88 | 92 |
| Blank | 90 | 100 |
| LCS | 92 | 105 |
| MS | 94 | 102 |
| MSD | 85 | 92 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141540006A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7479354 | 75 | 93 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7479355 | 68 | 82 |
| 7479357 | 86 | 87 |
| 7479358 | 87 | 87 |
| 7479359 | 68 | 82 |
| Blank | 74 | 88 |
| LCS | 76 | 91 |
| MS | 78 | 87 |
| MSD | 92 | 87 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141540007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7479354 | 59 | 67 |
| 7479355 | 67 | 75 |
| 7479357 | 57 | 62* |
| 7479358 | 64 | 67 |
| 7479359 | 63 | 72 |
| Blank | 50 | 54* |
| LCS | 62 | 67 |
| MS | 58 | 61* |
| MSD | 66 | 69 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14154001

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7479354 | 59 | 70 | 74 | 76 | 71 | 77 |
| 7479355 | 65 | 74 | 78 | 79 | 77 | 78 |
| 7479357 | 65 | 76 | 79 | 81 | 78 | 82 |
| 7479358 | 62 | 66 | 80 | 83 | 81 | 84 |
| 7479359 | 74 | 81 | 89 | 90 | 88 | 88 |
| Blank | 65 | 79 | 85 | 89 | 86 | 86 |
| OPR | 65 | 85 | 89 | 89 | 89 | 92 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7479354 | 74 | 51 | 73 | 67 | 67 | 76 |
| 7479355 | 67 | 58 | 77 | 70 | 72 | 82 |
| 7479357 | 72 | 57 | 79 | 73 | 72 | 82 |
| 7479358 | 73 | 56 | 69 | 64 | 78 | 85 |
| 7479359 | 77 | 65 | 84 | 79 | 84 | 93 |
| Blank | 78 | 57 | 80 | 74 | 75 | 86 |
| OPR | 90 | 52 | 82 | 77 | 75 | 86 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7479354 | 69 | 77 | 95 | 58 | 55 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477510
Reported: 06/10/14 at 08:58 AM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| 7479355 | 73 | 81 | 101 | 59 | 51 |
| 7479357 | 75 | 81 | 105 | 64 | 55 |
| 7479358 | 79 | 85 | 101 | 68 | 60 |
| 7479359 | 86 | 96 | 110 | 73 | 63 |
| Blank | 79 | 84 | 110 | 67 | 59 |
| OPR | 80 | 73 | 111 | 71 | 65 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/27/2014
CarrierName: FedEx
AirbillNo: 770107894616

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

A-13013 G-1477510 S-747935 4-59

COC No: 20140527-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other Analysis/Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-707-SA5B-TR-0.5 | 5/27/14 08:13 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | | | | | | | | | |
| SL-707-SA5B-TR-3.0 | 5/27/14 08:55 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-707-SA5B-TR-3.0 | 5/27/14 08:55 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | | | | | | | | | |
| TB3-052714 | 5/27/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-0.5 | 5/27/14 10:17 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-3.5 | 5/27/14 13:15 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-3.5 | 5/27/14 13:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-5.0 | 5/27/14 13:40 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | X | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-5.0 | 5/27/14 13:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Andrew Payne

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/27/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5.28.14 | 1115 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15723

Group Number(s): 1477570

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/28/2014 11:15 |
| Number of Packages: | 2 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 12:23 on 05/28/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.3 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 4.6 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/29/2014
Group Number: 1477788
SDG: PH203
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-507-SA5C-SB-5.0-6.0 Soil | 7480323 |
| TB2-052814 Water | 7480324 |
| SVL-551-SA5C-SB-2.0-2.8 Soil | 7480325 |
| SVL-545-SA5C-SB-3.0-3.5 Soil | 7480326 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SVL-507-SA5C-SB-5.0-6.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7480323**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 09:40 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50750 SDG#: PH203-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 7 | 0.86 |
| 10237 | Acrolein | 107-02-8 | 96 | U | 96 | 19 | 0.86 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.86 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.86 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.86 |
| 10237 | t-Butyl alcohol | 75-65-0 | 48 | U | 48 | 19 | 0.86 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.86 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.86 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.86 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-507-SA5C-SB-5.0-6.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7480323**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 09:40 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50750 SDG#: PH203-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.86 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.86 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.86 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.86 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.86 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.86 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.9 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 02:03 | Andrea E Lando | 0.86 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 1 | 201414934643 | 05/29/2014 15:13 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-507-SA5C-SB-5.0-6.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7480323**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 09:40 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50750 SDG#: PH203-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 2 | 201414934643 | 05/29/2014 15:13 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035 | 1 | 201414934643 | 05/29/2014 14:45 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7480324**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:00

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB--2 SDG#: PH203-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052814 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7480324**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:00

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB--2 SDG#: PH203-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141551AA | 06/04/2014 11:46 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141551AA | 06/04/2014 11:46 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-551-SA5C-SB-2.0-2.8 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7480325**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 15:15 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55120 SDG#: PH203-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.97 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.97 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.97 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.97 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.97 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 20 | 0.97 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.97 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.97 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.97 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.97 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.97 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.97 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-551-SA5C-SB-2.0-2.8 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7480325**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 15:15 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55120 SDG#: PH203-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.97 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.97 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.97 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.97 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.97 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.97 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.97 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.97 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.97 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.97 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.97 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.9 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 02:25 | Andrea E Lando | 0.97 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 1 | 201414934643 | 05/29/2014 15:12 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-551-SA5C-SB-2.0-2.8 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7480325**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 15:15 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55120 SDG#: PH203-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 2 | 201414934643 | 05/29/2014 15:13 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035 | 1 | 201414934643 | 05/29/2014 14:47 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-545-SA5C-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7480326**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:10 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54530 SDG#: PH203-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 23 | U | 23 | 8 | 1.07 |
| 10237 | Acrolein | 107-02-8 | 120 | U | 120 | 23 | 1.07 |
| 10237 | Acrylonitrile | 107-13-1 | 23 | U | 23 | 5 | 1.07 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 1.07 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Butanone | 78-93-3 | 12 | U | 12 | 5 | 1.07 |
| 10237 | t-Butyl alcohol | 75-65-0 | 58 | U | 58 | 23 | 1.07 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 12 | U | 12 | 2 | 1.07 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Hexanone | 591-78-6 | 12 | U | 12 | 3 | 1.07 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-545-SA5C-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7480326**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:10 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54530 SDG#: PH203-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 3 | 1.07 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 1.07 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 12 | U | 12 | 3 | 1.07 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 1.07 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Vinyl Acetate | 108-05-4 | 12 | U | 12 | 2 | 1.07 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 1.07 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 02:47 | Andrea E Lando | 1.07 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 1 | 201414934643 | 05/29/2014 15:13 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-545-SA5C-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7480326**
**LL Group # 1477788**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:10 by VV

Submitted: 05/29/2014 09:35
Reported: 06/09/2014 12:48

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54530 SDG#: PH203-04*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 2 | 201414934643 | 05/29/2014 15:13 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035 | 1 | 201414934643 | 05/29/2014 14:51 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477788
Reported: 06/09/14 at 12:48 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141562AA | Sample number(s): 7480323,7480325-7480326 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 99 | 100 | 41-149 | 1 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 81 | 94 | 50-137 | 15 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 96 | 91 | 58-123 | 6 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 97 | 99 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 102 | 100 | 80-120 | 2 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 2 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 106 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 75-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 101 | 102 | 70-126 | 1 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 100 | 94 | 32-162 | 5 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 92 | 93 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 100 | 107 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 72-120 | 0 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 104 | 101 | 69-120 | 3 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 75-120 | 0 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 104 | 96 | 63-128 | 8 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 104 | 102 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | 105 | 80-120 | 3 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 95 | 89 | 17-171 | 6 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 83 | 85 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 70-130 | 1 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 93 | 90 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 104 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 101 | 105 | 79-120 | 3 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 81 | 79 | 22-131 | 2 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 93 | 97 | 50-132 | 4 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 103 | 106 | 77-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 75-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 103 | 103 | 80-120 | 0 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 26-137 | 3 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 98 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 106 | 108 | 66-136 | 2 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 102 | 73-129 | 8 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 103 | 79-120 | 8 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 98 | 98 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 101 | 73-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477788
Reported: 06/09/14 at 12:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 103 | 104 | 77-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 96 | 74-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 101 | 100 | 69-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 95 | 98 | 59-134 | 3 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 2 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 102 | 95 | 64-137 | 7 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 96 | 100 | 46-130 | 5 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 90 | 91 | 40-129 | 1 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 68-128 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 98 | 101 | 69-120 | 3 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 110 | 105 | 72-130 | 5 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 104 | 101 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 92 | 93 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 115 | 103 | 80-124 | 11 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 105 | 104 | 76-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 102 | 71-123 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 117 | 119 | 78-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 64-120 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | 99 | 68-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 103 | 100 | 63-135 | 3 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | 104 | 80-120 | 3 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | 93 | 58-133 | 3 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 105 | 110 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 79-120 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 113 | 116 | 40-127 | 2 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 97 | 93 | 59-120 | 4 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 0 | 30 |
| Batch number: Y141551AA | Sample number(s): 7480324 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 89 | 88 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 76 | 76 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 94 | 94 | 62-120 | 0 | 30 |
| t-Amyl methyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 75-120 | 2 | 30 |
| Benzene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 78-120 | 2 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 95 | 97 | 80-120 | 3 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 95 | 96 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 73-120 | 1 | 30 |
| Bromoform | 4 | U | 4. | 0.5 | ug/l | 89 | 87 | 61-120 | 2 | 30 |
| Bromomethane | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 54-133 | 2 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 96 | 95 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 88 | 90 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 73-120 | 2 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 89 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 | U | 1. | 0.5 | ug/l | 101 | 104 | 74-130 | 2 | 30 |
| Chlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 80-120 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477788
Reported: 06/09/14 at 12:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 1 | U | 1. | 0.5 | ug/l | 90 | 93 | 56-120 | 3 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 101 | 103 | 54-126 | 2 | 30 |
| Chloroform | 1 | U | 1. | 0.5 | ug/l | 98 | 100 | 80-122 | 3 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 96 | 99 | 80-120 | 3 | 30 |
| Chloromethane | 1 | U | 1. | 0.5 | ug/l | 103 | 106 | 63-120 | 3 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 90 | 93 | 80-120 | 3 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 89 | 93 | 80-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 71 | 69 | 47-120 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 85 | 85 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 | U | 1. | 0.5 | ug/l | 95 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 | U | 1. | 0.5 | ug/l | 97 | 97 | 76-120 | 0 | 30 |
| Dibromomethane | 1 | U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 48-132 | 3 | 30 |
| 1,1-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 94 | 80-120 | 3 | 30 |
| 1,2-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 65-135 | 1 | 30 |
| 1,1-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 109 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |
| trans-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 113 | 80-120 | 4 | 30 |
| 1,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 87 | 91 | 80-120 | 4 | 30 |
| 1,3-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 90 | 90 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 99 | 99 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 98 | 102 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 91 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 91 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 97 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 104 | 101 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 89 | 92 | 51-125 | 3 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 84 | 86 | 44-126 | 2 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 89 | 92 | 65-120 | 3 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 89 | 92 | 80-120 | 3 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 108 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 104 | 105 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 51-124 | 3 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 106 | 107 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 90 | 92 | 80-120 | 3 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 86 | 87 | 70-120 | 2 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 91 | 91 | 58-126 | 0 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 66-126 | 3 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 92 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 102 | 102 | 65-130 | 0 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 91 | 94 | 76-120 | 3 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 3 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 73 | 56-135 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477788
Reported: 06/09/14 at 12:48 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 63-120 | 1 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 80-120 | 2 | 30 |
| Batch number: 14154162401B | Sample number(s): 7480323,7480325-7480326 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14154162401B | Sample number(s): 7480323,7480325-7480326 | | | | | BKG: P480416 | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.7 | 7.2 | 6 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141562AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7480323 | 108 | 109 | 99 | 95 |
| 7480325 | 104 | 100 | 100 | 91 |
| 7480326 | 107 | 103 | 101 | 93 |
| Blank | 102 | 104 | 100 | 95 |
| LCS | 102 | 104 | 104 | 100 |
| LCSD | 101 | 100 | 103 | 101 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141551AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7480324 | 101 | 101 | 96 | 96 |
| Blank | 101 | 100 | 96 | 95 |
| LCS | 101 | 98 | 98 | 99 |
| LCSD | 100 | 101 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/28/2014
CarrierName: FedEx
AirbillNo: 770118975080

A-13013 G-1477788 S-7480323-26

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140528-04
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-507-SA5C-SB-5.0-6.0 | 5/28/14 09:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-507-SA5C-SB-5.0-6.0 | 5/28/14 09:40 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| TB2-052814 | 5/28/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-551-SA5C-SB-2.0-2.8 | 5/28/14 15:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-551-SA5C-SB-2.0-2.8 | 5/28/14 15:15 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-545-SA5C-SB-3.0-3.5 | 5/28/14 14:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-545-SA5C-SB-3.0-3.5 | 5/28/14 14:10 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Van Vathavanh

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/29/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/29/14 | 0935 |

SOIL VAPOR

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15826

Group Number(s): 1477788

Client: CDM SMITH

## SSFL PHASE 3

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/29/2014 9:35 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | Yes | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Corey Eshleman (3647) at 10:53 on 05/29/2014

### Samples Chilled Details: SSFL PHASE 3

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 2 | DT121 | 0.7 | DT | Wet | Y | Bagged | N | N |
| 3 | DT121 | 1.2 | DT | Wet | Y | Bagged | N | N |

### Extra Sample Details: SSFL PHASE 3

| Sample ID on Label | Number of Extra Containers | Date on Label | Comments |
|---|---|---|---|
| SL-699-SA5B-TR-8.0 | 4 | 5/28/2014 11:00 | 2 ENCORE/ 2 (16oz) GLASS |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 12, 2014

Project: SSFL Phase 3 Sampling

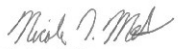
Submittal Date: 05/29/2014
Group Number: 1477802
SDG: PH204
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-699-SA5B-TR-0.5 Soil | 7480411 |
| SL-699-SA5B-TR-3.0 Soil | 7480412 |
| SL-693-SA5B-TR-3.0 Soil | 7480413 |
| TB3-052814 Water | 7480414 |
| SL-529-SA5B-TR-0.5 Soil | 7480415 |
| SL-529-SA5B-TR-2.0 Soil | 7480416 |
| SL-529-SA5B-TR-3.0 Soil | 7480417 |
| SL-529-SA5B-TR-11.0 Soil | 7480418 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-699-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480411**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69905 SDG#: PH204-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 3.8 | | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 8.8 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 20 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 45 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 21 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 27 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 10 | J | 18 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 4.6 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 36 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.5 | J | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 7.2 | J | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 73 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 3.0 | | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 3.6 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 280 | | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 250 | | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 76 | | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 700 | | 17 | 6.9 | 10 |
| 12969 | Pyrene | 129-00-0 | 77 | | 1.7 | 0.69 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 4.3 | U | 4.3 | 0.88 | 5 |
| 10590 | Alpha BHC | 319-84-6 | 4.3 | U | 4.3 | 0.88 | 5 |
| 10590 | Beta BHC | 319-85-7 | 9.8 | U | 9.8 | 4.9 | 5 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 4.3 | U | 4.3 | 0.88 | 5 |
| 10590 | Chlordane | 57-74-9 | 88 | U | 88 | 21 | 5 |
| 10590 | p,p-DDD | 72-54-8 | 39 | U | 39 | 39 | 5 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | J | 8.8 | 1.7 | 5 |
| 10590 | p,p-DDT | 50-29-3 | 5.5 | J | 8.8 | 1.8 | 5 |
| 10590 | Delta BHC | 319-86-8 | 4.3 | U | 4.3 | 2.3 | 5 |
| 10590 | Dieldrin | 60-57-1 | 8.8 | U | 8.8 | 1.9 | 5 |
| 10590 | Endosulfan I | 959-98-8 | 2.7 | J | 4.3 | 1.1 | 5 |
| 10590 | Endosulfan II | 33213-65-9 | 8.8 | U | 8.8 | 1.7 | 5 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 4.6 | J | 8.8 | 1.7 | 5 |
| 10590 | Endrin | 72-20-8 | 8.8 | U | 8.8 | 3.0 | 5 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-699-SA5B-TR-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7480411**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69905 SDG#: PH204-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin Aldehyde | 7421-93-4 | 8.8 | U | 8.8 | 1.7 | 5 |
| 10590 | Endrin Ketone | 53494-70-5 | 9.3 | U | 9.3 | 3.1 | 5 |
| 10590 | Heptachlor | 76-44-8 | 1.2 | J | 4.3 | 0.88 | 5 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 4.3 | U | 4.3 | 0.88 | 5 |
| 10590 | Methoxychlor | 72-43-5 | 35 | U | 35 | 8.8 | 5 |
| 10590 | Mirex | 2385-85-5 | 8.8 | U | 8.8 | 1.8 | 5 |
| 10590 | Toxaphene | 8001-35-2 | 190 | U | 190 | 190 | 5 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 27 | | 18 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 7.6 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 36 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 64 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 65 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 7.9 | | 5.1 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.6 | J | 5.1 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 16 | | 5.1 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 23 | | 5.1 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 22 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.6 | | 5.1 | 2.1 | 1 |
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,500 | | 39.6 | 7.14 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.96 | U | 3.96 | 0.733 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.77 | | 3.96 | 0.693 | 1 |
| 06946 | Barium | 7440-39-3 | 112 | | 0.990 | 0.0327 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.839 | J | 0.990 | 0.0663 | 1 |
| 07914 | Boron | 7440-42-8 | 11.4 | | 9.90 | 0.832 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.150 | J | 0.990 | 0.0753 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,020 | | 19.8 | 3.31 | 1 |
| 06951 | Chromium | 7440-47-3 | 22.8 | | 2.97 | 0.158 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.66 | | 0.990 | 0.0980 | 1 |
| 06953 | Copper | 7440-50-8 | 13.3 | | 1.98 | 0.287 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480411**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69905 SDG#: PH204-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01654 | Iron | 7439-89-6 | 22,700 | 39.6 | 3.58 | 1 |
| 06955 | Lead | 7439-92-1 | 10.0 | 2.97 | 0.495 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.6 | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,390 | 9.90 | 1.65 | 1 |
| 06958 | Manganese | 7439-96-5 | 308 | 0.990 | 0.0822 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.599 J | 1.98 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.2 | 1.98 | 0.129 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 421 | 9.90 | 2.86 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,730 | 99.0 | 8.26 | 1 |
| 01667 | Sodium | 7440-23-5 | 103 | 99.0 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.78 J | 9.90 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,090 | 0.990 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.7 | 0.990 | 0.129 | 1 |
| 06972 | Zinc | 7440-66-6 | 91.6 | 3.96 | 0.198 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.03 | 4.95 | 0.832 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.247 J | 0.396 | 0.0990 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0356 J | 0.198 | 0.0257 | 2 |
| 06144 | Strontium | 7440-24-6 | 18.3 | 0.396 | 0.0673 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.302 | 0.198 | 0.0297 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0153 J | 0.0164 | 0.0098 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 4.52 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 20.8 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.9 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-699-SA5B-TR-0.5 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7480411**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69905 SDG#: PH204-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0931 JBQ | 0.999 | 0.0443 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.359 JBQ | 4.99 | 0.0578 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.360 JB | 4.99 | 0.0577 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 1.53 JB | 4.99 | 0.0627 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.998 JB | 4.99 | 0.0582 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 35.6 B | 4.99 | 0.0580 | 1 |
| 11031 | OCDD | 3268-87-9 | 576 B | 9.99 | 0.0550 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.162 JQ | 0.999 | 0.0667 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.891 JB | 4.99 | 0.0382 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.640 JB | 4.99 | 0.0368 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.456 JB | 4.99 | 0.0532 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.517 JBQ | 4.99 | 0.0502 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.982 JB | 4.99 | 0.0516 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.475 JB | 4.99 | 0.0512 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 5.60 B | 4.99 | 0.0240 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.569 JB | 4.99 | 0.0376 | 1 |
| 11031 | OCDF | 39001-02-0 | 12.1 B | 9.99 | 0.0356 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 1.29 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 79 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 89 | 23 - 140 |
| 13C12-OCDD | 91 | 17 - 157 |
| 13C12-2378-TCDF | 77 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 104 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 70 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480411**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69905 SDG#: PH204-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480411**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69905 SDG#: PH204-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/05/2014 09:36 | Mark A Clark | 10 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/05/2014 10:08 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 08:40 | Jamie L Brillhart | 5 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 20:22 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 07:31 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/06/2014 00:02 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/05/2014 23:38 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 11:46 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480411**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69905 SDG#: PH204-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:35 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:27 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:27 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:27 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:27 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:13 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-699-SA5B-TR-3.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7480412**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69930 SDG#: PH204-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.6 | J | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 2.5 | | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 7.6 | | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 14 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 8.0 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 9.4 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.1 | J | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 3.3 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 12 | | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.88 | J | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 19 | | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 2.1 | | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.1 | | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 73 | | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 59 | | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 15 | | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 180 | | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 23 | | 1.8 | 0.71 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 23.02 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.3 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 1.4 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.48 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480412**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69930 SDG#: PH204-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.62 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.39 | J | 0.88 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.1 | J | 1.8 | 0.35 | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.76 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.64 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.54 | J | 0.88 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 3.4 | J | 7.1 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 54 | U | 54 | 54 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.3 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 9.4 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 23,200 | | 42.2 | 7.61 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.22 | U | 4.22 | 0.781 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.80 | | 4.22 | 0.739 | 1 |
| 06946 | Barium | 7440-39-3 | 142 | | 1.06 | 0.0348 | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.11 | | 1.06 | 0.0707 | 1 |
| 07914 | Boron | 7440-42-8 | 5.26 | J | 10.6 | 0.887 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-699-SA5B-TR-3.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7480412**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69930 SDG#: PH204-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0802 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,910 | | 21.1 | 3.53 | 1 |
| 06951 | Chromium | 7440-47-3 | 27.7 | | 3.17 | 0.169 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.27 | | 1.06 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 12.9 | | 2.11 | 0.306 | 1 |
| 01654 | Iron | 7439-89-6 | 28,500 | | 42.2 | 3.82 | 1 |
| 06955 | Lead | 7439-92-1 | 8.98 | | 3.17 | 0.528 | 1 |
| 01656 | Lithium | 7439-93-2 | 30.1 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,560 | | 10.6 | 1.76 | 1 |
| 06958 | Manganese | 7439-96-5 | 441 | | 1.06 | 0.0876 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.318 | J | 2.11 | 0.179 | 1 |
| 06961 | Nickel | 7440-02-0 | 17.5 | | 2.11 | 0.137 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 308 | | 10.6 | 3.05 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,240 | | 106 | 8.80 | 1 |
| 01667 | Sodium | 7440-23-5 | 136 | | 106 | 17.6 | 1 |
| 06969 | Tin | 7440-31-5 | 3.00 | J | 10.6 | 0.232 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,270 | | 1.06 | 0.179 | 1 |
| 06971 | Vanadium | 7440-62-2 | 51.9 | | 1.06 | 0.137 | 1 |
| 06972 | Zinc | 7440-66-6 | 86.4 | | 4.22 | 0.211 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.82 | J | 5.28 | 0.887 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.175 | J | 0.422 | 0.106 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0581 | J | 0.211 | 0.0274 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.5 | | 0.422 | 0.0718 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.314 | | 0.211 | 0.0317 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0168 | U | 0.0168 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.49 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480412**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69930 SDG#: PH204-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0741 JBQ | 1.03 | 0.0491 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.210 JB | 5.13 | 0.0432 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.194 JBQ | 5.13 | 0.0422 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.458 JBQ | 5.13 | 0.0447 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.438 JBQ | 5.13 | 0.0441 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 7.91 B | 5.13 | 0.0432 | 1 |
| 11031 | OCDD | 3268-87-9 | 97.4 B | 10.3 | 0.0413 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.108 J | 1.03 | 0.0445 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.294 JBQ | 5.13 | 0.0238 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.260 JB | 5.13 | 0.0247 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.206 JB | 5.13 | 0.0421 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.129 JBQ | 5.13 | 0.0369 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.222 JB | 5.13 | 0.0444 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.180 JBQ | 5.13 | 0.0399 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.72 JB | 5.13 | 0.0173 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.273 JB | 5.13 | 0.0347 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.64 JB | 10.3 | 0.0405 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.471 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 71 | 25 - 164 |
| 13C12-12378-PeCDD | 77 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 69 | 24 - 169 |
| 13C12-12378-PeCDF | 82 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 87 | 26 - 123 |
| 13C12-234678-HxCDF | 76 | 28 - 136 |
| 13C12-123789-HxCDF | 75 | 29 - 147 |
| 13C12-1234678-HpCDF | 109 | 28 - 143 |
| 13C12-1234789-HpCDF | 65 | 26 - 138 |
| 13C12-OCDF | 64 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480412**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69930 SDG#: PH204-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480412**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69930 SDG#: PH204-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 09:27 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/03/2014 22:22 | Laura M Krieger | 23.02 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414934641 | 05/29/2014 15:02 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414934641 | 05/29/2014 15:03 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 08:54 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 20:40 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 06:04 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 19:42 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/06/2014 00:34 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480412**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 10:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69930 SDG#: PH204-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:39 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:30 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:30 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:30 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:30 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:15 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-693-SA5B-TR-3.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7480413**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:35 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69330 SDG#: PH204-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.2 | J | 1.7 | 0.69 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 2.0 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 5.7 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 5.0 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 6.7 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.4 | | 1.7 | 0.69 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.3 | | 1.7 | 0.69 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 6.4 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.87 | J | 1.7 | 0.69 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 11 | | 1.7 | 0.69 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.2 | | 1.7 | 0.69 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 8.4 | | 1.7 | 0.69 | 1 |
| 12969 | Pyrene | 129-00-0 | 10 | | 1.7 | 0.69 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.3 | U | 1.3 | 0.3 | 30.41 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.69 | J | 1.8 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.86 | U | 0.86 | 0.47 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.86 | U | 0.86 | 0.23 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480413**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:35 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69330 SDG#: PH204-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.62 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.86 | U | 0.86 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.5 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 13 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,700 | | 41.1 | 7.41 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.761 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.82 | | 4.11 | 0.720 | 1 |
| 06946 | Barium | 7440-39-3 | 92.3 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.664 | J | 1.03 | 0.0689 | 1 |
| 07914 | Boron | 7440-42-8 | 3.13 | J | 10.3 | 0.864 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0781 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,390 | | 20.6 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 18.8 | | 3.08 | 0.165 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.88 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 8.93 | | 2.06 | 0.298 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480413**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:35 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69330 SDG#: PH204-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01654 | Iron | 7439-89-6 | 18,400 | | 41.1 | 3.72 | 1 |
| 06955 | Lead | 7439-92-1 | 6.24 | | 3.08 | 0.514 | 1 |
| 01656 | Lithium | 7439-93-2 | 17.6 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,750 | | 10.3 | 1.72 | 1 |
| 06958 | Manganese | 7439-96-5 | 223 | | 1.03 | 0.0853 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.251 | J | 2.06 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.3 | | 2.06 | 0.134 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 254 | | 10.3 | 2.97 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,270 | | 103 | 8.57 | 1 |
| 01667 | Sodium | 7440-23-5 | 86.8 | J | 103 | 17.2 | 1 |
| 06969 | Tin | 7440-31-5 | 2.61 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 858 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.1 | | 1.03 | 0.134 | 1 |
| 06972 | Zinc | 7440-66-6 | 40.6 | | 4.11 | 0.206 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.25 | J | 5.14 | 0.864 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.148 | J | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.206 | U | 0.206 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 26.7 | | 0.411 | 0.0699 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.208 | | 0.206 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0122 | J | 0.0169 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.47 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.1 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480413**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:35 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69330 SDG#: PH204-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0417 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0696 | JBQ | 5.13 | 0.0396 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0454 | JBQ | 5.13 | 0.0320 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.175 | JBQ | 5.13 | 0.0330 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.248 | JBQ | 5.13 | 0.0288 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.18 | JB | 5.13 | 0.0318 | 1 |
| 11031 | OCDD | 3268-87-9 | 30.8 | B | 10.3 | 0.0324 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0464 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.139 | JBQ | 5.13 | 0.0218 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.108 | JBQ | 5.13 | 0.0218 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0775 | JBQ | 5.13 | 0.0343 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.100 | JBQ | 5.13 | 0.0290 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.277 | JBQ | 5.13 | 0.0318 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.149 | JBQ | 5.13 | 0.0323 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.524 | JB | 5.13 | 0.0151 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0886 | JBQ | 5.13 | 0.0274 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.03 | JBQ | 10.3 | 0.0373 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0363 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 95 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 86 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 81 | 28 - 136 |
| 13C12-123789-HxCDF | 86 | 29 - 147 |
| 13C12-1234678-HpCDF | 112 | 28 - 143 |
| 13C12-1234789-HpCDF | 69 | 26 - 138 |
| 13C12-OCDF | 66 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480413**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:35 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69330 SDG#: PH204-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480413**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:35 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69330 SDG#: PH204-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 10:00 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/03/2014 23:00 | Laura M Krieger | 30.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414934641 | 05/29/2014 15:04 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414934641 | 05/29/2014 15:04 | Mitchell R Washel | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 09:21 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 20:59 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 06:26 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 23:40 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/06/2014 01:31 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 11:50 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-693-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480413**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:35 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

69330 SDG#: PH204-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:50 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:37 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:37 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:37 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:37 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:17 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB3-052814 Water**
**SSFL Phase 3 Subarea 5B**

**LL Sample # WW 7480414**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 08:00

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB328 SDG#: PH204-04TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14150B94A | 06/03/2014 11:08 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14150B94A | 06/03/2014 11:08 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480415**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 13:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52905 SDG#: PH204-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.9 | | 1.7 | 0.35 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 6.7 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 4.7 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 7.0 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 4.3 | J | 18 | 3.5 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.7 | | 1.7 | 0.70 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.7 | | 1.7 | 0.70 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 7.3 | J | 19 | 6.3 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Chrysene | 218-01-9 | 6.9 | | 1.7 | 0.35 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 0.97 | J | 1.7 | 0.70 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 16 | J | 19 | 6.3 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 12 | | 1.7 | 0.70 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | | 1.7 | 0.70 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Morpholine | 110-91-8 | 21 | U | 21 | 21 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 7.9 | J | 19 | 6.3 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.9 | | 1.7 | 0.70 | 1 |
| 12969 | Pyrene | 129-00-0 | 8.6 | | 1.7 | 0.70 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 7.6 | J | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480415**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 13:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52905 SDG#: PH204-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 33 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 83 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 18 | | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 40 | | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,600 | | 41.1 | 7.40 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.760 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.56 | J | 4.11 | 0.719 | 1 |
| 06946 | Barium | 7440-39-3 | 82.8 | | 1.03 | 0.0339 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.513 | J | 1.03 | 0.0688 | 1 |
| 07914 | Boron | 7440-42-8 | 3.58 | J | 10.3 | 0.862 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.103 | J | 1.03 | 0.0780 | 1 |
| 01650 | Calcium | 7440-70-2 | 6,820 | | 20.5 | 3.43 | 1 |
| 06951 | Chromium | 7440-47-3 | 15.8 | | 3.08 | 0.164 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.42 | | 1.03 | 0.102 | 1 |
| 06953 | Copper | 7440-50-8 | 8.36 | | 2.05 | 0.298 | 1 |
| 01654 | Iron | 7439-89-6 | 18,100 | | 41.1 | 3.72 | 1 |
| 06955 | Lead | 7439-92-1 | 4.94 | | 3.08 | 0.513 | 1 |
| 01656 | Lithium | 7439-93-2 | 20.0 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,180 | | 10.3 | 1.71 | 1 |
| 06958 | Manganese | 7439-96-5 | 263 | | 1.03 | 0.0852 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.463 | J | 2.05 | 0.175 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.89 | | 2.05 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 389 | | 10.3 | 2.97 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,780 | | 103 | 8.56 | 1 |
| 01667 | Sodium | 7440-23-5 | 460 | | 103 | 17.1 | 1 |
| 06969 | Tin | 7440-31-5 | 2.84 | J | 10.3 | 0.226 | 1 |
| 06970 | Titanium | 7440-32-6 | 933 | | 1.03 | 0.175 | 1 |
| 06971 | Vanadium | 7440-62-2 | 29.8 | | 1.03 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 67.2 | | 4.11 | 0.205 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.47 | J | 5.13 | 0.862 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.164 | J | 0.411 | 0.103 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0437 | J | 0.205 | 0.0267 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.7 | | 0.411 | 0.0698 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.207 | | 0.205 | 0.0308 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0264 | | 0.0168 | 0.0101 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480415**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 13:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52905 SDG#: PH204-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.3 C. | n.a. | 8.78 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.5 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480415**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 13:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52905 SDG#: PH204-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0443 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.263 | JB | 5.20 | 0.0489 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.275 | JBQ | 5.20 | 0.0652 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.943 | JB | 5.20 | 0.0679 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.969 | JB | 5.20 | 0.0614 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 26.2 | B | 5.20 | 0.0532 | 1 |
| 11031 | OCDD | 3268-87-9 | 347 | B | 10.4 | 0.0448 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0494 | JQ | 1.04 | 0.0399 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.177 | JBQ | 5.20 | 0.0254 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.142 | JB | 5.20 | 0.0227 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.215 | JB | 5.20 | 0.0445 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.279 | JBQ | 5.20 | 0.0445 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.205 | JBQ | 5.20 | 0.0442 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.338 | JB | 5.20 | 0.0412 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 3.45 | JB | 5.20 | 0.0231 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.289 | JBQ | 5.20 | 0.0313 | 1 |
| 11031 | OCDF | 39001-02-0 | 8.53 | JB | 10.4 | 0.0351 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.955 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 92 | 23 - 140 |
| 13C12-OCDD | 100 | 17 - 157 |
| 13C12-2378-TCDF | 80 | 24 - 169 |
| 13C12-12378-PeCDF | 83 | 24 - 185 |
| 13C12-23478-PeCDF | 84 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 92 | 29 - 147 |
| 13C12-1234678-HpCDF | 100 | 28 - 143 |
| 13C12-1234789-HpCDF | 82 | 26 - 138 |
| 13C12-OCDF | 83 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480415**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 13:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52905 SDG#: PH204-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480415**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 13:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52905 SDG#: PH204-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 12:09 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 21:17 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 08:57 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/06/2014 00:45 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/06/2014 02:27 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:54 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480415**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 13:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52905 SDG#: PH204-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:39 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:39 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:39 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:39 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:19 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480416**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52920 SDG#: PH204-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.73 | J | 1.8 | 0.72 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.78 | J | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 20 | 6.5 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.1 | J | 1.8 | 0.72 | 1 |
| 12969 | Morpholine | 110-91-8 | 22 | U | 22 | 22 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.98 | J | 1.8 | 0.72 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.5 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.89 | J | 1.8 | 0.72 | 1 |
| 12969 | Pyrene | 129-00-0 | 0.78 | J | 1.8 | 0.72 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | 23.28 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 8.6 | J | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 6.9 | J | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480416**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52920 SDG#: PH204-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 10 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.2 | J | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 5.2 | J | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,400 | | 42.9 | 7.73 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.29 | U | 4.29 | 0.794 | 1 |
| 06935 | Arsenic | 7440-38-2 | 5.10 | | 4.29 | 0.751 | 1 |
| 06946 | Barium | 7440-39-3 | 82.7 | | 1.07 | 0.0354 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.662 | J | 1.07 | 0.0719 | 1 |
| 07914 | Boron | 7440-42-8 | 2.98 | J | 10.7 | 0.901 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.07 | U | 1.07 | 0.0815 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,390 | | 21.5 | 3.58 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.2 | | 3.22 | 0.172 | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.98 | | 1.07 | 0.106 | 1 |
| 06953 | Copper | 7440-50-8 | 8.33 | | 2.15 | 0.311 | 1 |
| 01654 | Iron | 7439-89-6 | 19,600 | | 42.9 | 3.88 | 1 |
| 06955 | Lead | 7439-92-1 | 5.90 | | 3.22 | 0.536 | 1 |
| 01656 | Lithium | 7439-93-2 | 23.2 | | 4.3 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,060 | | 10.7 | 1.79 | 1 |
| 06958 | Manganese | 7439-96-5 | 261 | | 1.07 | 0.0890 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.234 | J | 2.15 | 0.182 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.2 | | 2.15 | 0.139 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 334 | | 10.7 | 3.10 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,010 | | 107 | 8.95 | 1 |
| 01667 | Sodium | 7440-23-5 | 142 | | 107 | 17.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.85 | J | 10.7 | 0.236 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,040 | | 1.07 | 0.182 | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.7 | | 1.07 | 0.139 | 1 |
| 06972 | Zinc | 7440-66-6 | 119 | | 4.29 | 0.215 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.39 | J | 5.36 | 0.901 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.126 | J | 0.429 | 0.107 | 2 |
| 06142 | Silver | 7440-22-4 | 0.215 | U | 0.215 | 0.0279 | 2 |
| 06144 | Strontium | 7440-24-6 | 17.4 | | 0.429 | 0.0729 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.268 | | 0.215 | 0.0322 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0202 | | 0.0170 | 0.0102 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480416**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52920 SDG#: PH204-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.4 C. | n.a. | 6.88 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 7.7 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480416**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:05 by AP

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52920 SDG#: PH204-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.08 | U | 1.08 | 0.0539 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0879 | JB | 5.41 | 0.0513 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0529 | JB | 5.41 | 0.0435 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.402 | JB | 5.41 | 0.0443 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.319 | JBQ | 5.41 | 0.0415 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.73 | B | 5.41 | 0.0428 | 1 |
| 11031 | OCDD | 3268-87-9 | 80.9 | B | 10.8 | 0.0421 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.08 | U | 1.08 | 0.0511 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.354 | JB | 5.41 | 0.0247 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0958 | JBQ | 5.41 | 0.0253 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.134 | JBQ | 5.41 | 0.0401 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.112 | JBQ | 5.41 | 0.0341 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.227 | JBQ | 5.41 | 0.0451 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.119 | JB | 5.41 | 0.0373 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.674 | JBQ | 5.41 | 0.0212 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.145 | JBQ | 5.41 | 0.0479 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.57 | JB | 10.8 | 0.0512 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.268 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 75 | 25 - 164 |
| 13C12-12378-PeCDD | 80 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 83 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 91 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 76 | 21 - 178 |
| 13C12-123478-HxCDF | 73 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 75 | 28 - 136 |
| 13C12-123789-HxCDF | 71 | 29 - 147 |
| 13C12-1234678-HpCDF | 115 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 56 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480416**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52920 SDG#: PH204-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480416**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:05 by AP

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52920 SDG#: PH204-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 10:32 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/03/2014 23:38 | Laura M Krieger | 23.28 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414934641 | 05/29/2014 15:05 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414934641 | 05/29/2014 15:06 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 21:35 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 05:43 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 22:57 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/06/2014 03:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:02 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-2.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480416**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:05 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52920 SDG#: PH204-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:58 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:42 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:42 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:42 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:42 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:21 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480417**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:15 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52930 SDG#: PH204-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.0 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.87 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.5 | J | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.84 | J | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | J | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.6 | J | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.94 | J | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.5 | J | 1.8 | 0.71 | 1 |
| 12969 | Morpholine | 110-91-8 | 21 | U | 21 | 21 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.2 | J | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.3 | J | 1.8 | 0.71 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 9.4 | U | 9.4 | 1.9 | 220.46 |
| | Reporting limits were raised due to sample foaming. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480417**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:15 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52930 SDG#: PH204-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.4 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 33 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 7.7 | | 5.4 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 16 | | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,000 | | 41.6 | 7.49 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.16 | U | 4.16 | 0.769 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.31 | | 4.16 | 0.728 | 1 |
| 06946 | Barium | 7440-39-3 | 90.3 | | 1.04 | 0.0343 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.631 | J | 1.04 | 0.0696 | 1 |
| 07914 | Boron | 7440-42-8 | 0.940 | J | 10.4 | 0.873 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.04 | U | 1.04 | 0.0790 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,250 | | 20.8 | 3.47 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.6 | | 3.12 | 0.166 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.10 | | 1.04 | 0.103 | 1 |
| 06953 | Copper | 7440-50-8 | 7.81 | | 2.08 | 0.301 | 1 |
| 01654 | Iron | 7439-89-6 | 20,100 | | 41.6 | 3.76 | 1 |
| 06955 | Lead | 7439-92-1 | 5.53 | | 3.12 | 0.520 | 1 |
| 01656 | Lithium | 7439-93-2 | 24.5 | | 4.2 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,580 | | 10.4 | 1.74 | 1 |
| 06958 | Manganese | 7439-96-5 | 274 | | 1.04 | 0.0863 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.08 | U | 2.08 | 0.177 | 1 |
| 06961 | Nickel | 7440-02-0 | 9.80 | | 2.08 | 0.135 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 351 | | 10.4 | 3.00 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,050 | | 104 | 8.67 | 1 |
| 01667 | Sodium | 7440-23-5 | 252 | | 104 | 17.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.80 | J | 10.4 | 0.229 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 1.04 | 0.177 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.3 | | 1.04 | 0.135 | 1 |
| 06972 | Zinc | 7440-66-6 | 63.8 | | 4.16 | 0.208 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.03 | J | 5.20 | 0.873 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.130 | J | 0.416 | 0.104 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0532 | J | 0.208 | 0.0270 | 2 |
| 06144 | Strontium | 7440-24-6 | 21.6 | | 0.416 | 0.0707 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.305 | | 0.208 | 0.0312 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480417**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:15 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52930 SDG#: PH204-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0301 | 0.0169 | 0.0101 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.3 C. | n.a. | 8.16 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 6.6 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480417**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52930 SDG#: PH204-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0545 | JB | 1.04 | 0.0477 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.125 | JBQ | 5.20 | 0.0458 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.102 | JB | 5.20 | 0.0493 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.623 | JBQ | 5.20 | 0.0489 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.459 | JBQ | 5.20 | 0.0450 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 17.2 | B | 5.20 | 0.0449 | 1 |
| 11031 | OCDD | 3268-87-9 | 241 | B | 10.4 | 0.0365 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0527 | J | 1.04 | 0.0378 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.206 | JB | 5.20 | 0.0196 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.162 | JB | 5.20 | 0.0195 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.278 | JBQ | 5.20 | 0.0431 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.191 | JB | 5.20 | 0.0367 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.178 | JBQ | 5.20 | 0.0397 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.201 | JBQ | 5.20 | 0.0393 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 2.28 | JB | 5.20 | 0.0159 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.333 | JB | 5.20 | 0.0288 | 1 |
| 11031 | OCDF | 39001-02-0 | 5.73 | JB | 10.4 | 0.0359 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.416 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 90 | 32 - 141 |
| 13C12-123678-HxCDD | 92 | 28 - 130 |
| 13C12-123789-HxCDD | 95 | 28 - 130 |
| 13C12-1234678-HpCDD | 97 | 23 - 140 |
| 13C12-OCDD | 108 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 91 | 24 - 185 |
| 13C12-23478-PeCDF | 85 | 21 - 178 |
| 13C12-123478-HxCDF | 84 | 26 - 152 |
| 13C12-123678-HxCDF | 94 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 90 | 29 - 147 |
| 13C12-1234678-HpCDF | 121 | 28 - 143 |
| 13C12-1234789-HpCDF | 76 | 26 - 138 |
| 13C12-OCDF | 76 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480417**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:15 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52930 SDG#: PH204-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480417**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:15 by AP

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52930 SDG#: PH204-07

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 11:05 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 15:47 | Laura M Krieger | 220.46 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414934641 | 05/29/2014 15:06 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414934641 | 05/29/2014 15:07 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 21:54 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 08:14 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/06/2014 00:23 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/06/2014 04:20 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:02 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:02 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:02 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-3.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480417**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:15 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52930 SDG#: PH204-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:06 | Joanne M Gates | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:44 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:44 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:44 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:44 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:23 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-11.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480418**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52911 SDG#: PH204-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.3 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.1 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.5 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.80 | J | 1.8 | 0.73 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.75 | J | 1.8 | 0.73 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.4 | J | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 12 | J | 20 | 6.6 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.5 | J | 1.8 | 0.73 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.5 | J | 1.8 | 0.73 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.3 | J | 1.8 | 0.73 | 1 |
| 12969 | Morpholine | 110-91-8 | 22 | U | 22 | 22 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.8 | 0.73 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 0.99 | J | 1.8 | 0.73 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.8 | 0.73 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 21.82 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-11.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480418**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52911 SDG#: PH204-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 11 | U | 11 | 4.4 | 2 |
| 12952 | EFH (C15-C20) | n.a. | 7.9 | J | 11 | 4.4 | 2 |
| 12952 | EFH (C21-C30) | n.a. | 49 | | 11 | 4.4 | 2 |
| 12952 | EFH (C30-C40) | n.a. | 110 | | 22 | 8.8 | 2 |
| 12952 | EFH (C8-C11) | n.a. | 11 | U | 11 | 4.4 | 2 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 4.6 | J | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 28 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 58 | | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,300 | | 43.8 | 7.89 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.38 | U | 4.38 | 0.810 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.13 | J | 4.38 | 0.766 | 1 |
| 06946 | Barium | 7440-39-3 | 66.4 | | 1.09 | 0.0361 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.478 | J | 1.09 | 0.0733 | 1 |
| 07914 | Boron | 7440-42-8 | 3.29 | J | 10.9 | 0.919 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.09 | U | 1.09 | 0.0832 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,730 | | 21.9 | 3.65 | 1 |
| 06951 | Chromium | 7440-47-3 | 11.8 | | 3.28 | 0.175 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.53 | | 1.09 | 0.108 | 1 |
| 06953 | Copper | 7440-50-8 | 5.59 | | 2.19 | 0.317 | 1 |
| 01654 | Iron | 7439-89-6 | 16,500 | | 43.8 | 3.96 | 1 |
| 06955 | Lead | 7439-92-1 | 3.93 | | 3.28 | 0.547 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.7 | | 4.4 | 0.37 | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,530 | | 10.9 | 1.83 | 1 |
| 06958 | Manganese | 7439-96-5 | 215 | | 1.09 | 0.0908 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.19 | U | 2.19 | 0.186 | 1 |
| 06961 | Nickel | 7440-02-0 | 6.68 | | 2.19 | 0.142 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 310 | | 10.9 | 3.16 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,490 | | 109 | 9.12 | 1 |
| 01667 | Sodium | 7440-23-5 | 169 | | 109 | 18.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 10.9 | 0.241 | 1 |
| 06970 | Titanium | 7440-32-6 | 889 | | 1.09 | 0.186 | 1 |
| 06971 | Vanadium | 7440-62-2 | 25.4 | | 1.09 | 0.142 | 1 |
| 06972 | Zinc | 7440-66-6 | 51.6 | | 4.38 | 0.219 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.54 | J | 5.47 | 0.919 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.119 | J | 0.438 | 0.109 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0379 | J | 0.219 | 0.0284 | 2 |
| 06144 | Strontium | 7440-24-6 | 16.5 | | 0.438 | 0.0744 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.205 | J | 0.219 | 0.0328 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0224 | | 0.0177 | 0.0106 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-11.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480418**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52911 SDG#: PH204-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.1 C. | n.a. | 8.61 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 8.6 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-11.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480418**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52911 SDG#: PH204-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0435 JBQ | 1.06 | 0.0420 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.30 U | 5.30 | 0.0412 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0624 JBQ | 5.30 | 0.0456 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.417 JBQ | 5.30 | 0.0456 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.422 JBQ | 5.30 | 0.0427 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 9.56 B | 5.30 | 0.0396 | 1 |
| 11031 | OCDD | 3268-87-9 | 117 B | 10.6 | 0.0354 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0457 JQ | 1.06 | 0.0350 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.169 JB | 5.30 | 0.0188 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.103 JB | 5.30 | 0.0187 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.116 JBQ | 5.30 | 0.0457 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.162 JBQ | 5.30 | 0.0392 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.146 JB | 5.30 | 0.0425 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.116 JBQ | 5.30 | 0.0419 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.39 JB | 5.30 | 0.0183 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.147 JBQ | 5.30 | 0.0327 | 1 |
| 11031 | OCDF | 39001-02-0 | 3.83 JB | 10.6 | 0.0391 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.196 | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 89 | 28 - 130 |
| 13C12-123789-HxCDD | 92 | 28 - 130 |
| 13C12-1234678-HpCDD | 93 | 23 - 140 |
| 13C12-OCDD | 101 | 17 - 157 |
| 13C12-2378-TCDF | 78 | 24 - 169 |
| 13C12-12378-PeCDF | 91 | 24 - 185 |
| 13C12-23478-PeCDF | 83 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 95 | 26 - 123 |
| 13C12-234678-HxCDF | 88 | 28 - 136 |
| 13C12-123789-HxCDF | 92 | 29 - 147 |
| 13C12-1234678-HpCDF | 119 | 28 - 143 |
| 13C12-1234789-HpCDF | 76 | 26 - 138 |
| 13C12-OCDF | 74 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-11.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480418**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52911 SDG#: PH204-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-11.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480418**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52911 SDG#: PH204-08

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 11:37 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 03:13 | Laura M Krieger | 21.82 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414934641 | 05/29/2014 15:08 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414934641 | 05/29/2014 15:08 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 22:12 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 14:20 | Heather E Williams | 2 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/06/2014 01:49 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/06/2014 05:17 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:10 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-529-SA5B-TR-11.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480418**
**LL Group # 1477802**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 14:30 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:09

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52911 SDG#: PH204-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:06 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:46 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:46 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:46 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:46 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:25 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14151SLE026 | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 79* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 81 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 86 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Morpholine | 20 | U | 20. | 20 | ug/kg | | | | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 80-119 | | |
| Batch number: 14150B94A | Sample number(s): 7480414 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 97 | 92 | 80-133 | 6 | 30 |
| Batch number: 14154A16A | Sample number(s): 7480412-7480413,7480416-7480418 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 141530004A | Sample number(s): 7480411-7480413 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 86 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 88 | | 55-135 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 89 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 56-138 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 100 | | 64-139 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 89 | | 59-137 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 68-134 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 88 | | 56-128 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 85 | | 61-125 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 89 | | 69-126 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 89 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 94 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 100 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141610021A | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 87 | 89 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 106 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 110 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141540006A | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 87 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 60-115 | | |
| Batch number: 141540007A | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 66* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 54 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 54* | | 60-115 | | |
| Batch number: 141540637001 | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 105 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 106 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 9.64 | J | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 105 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 107 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 105 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.45 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 108 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 104 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 106 | | 80-120 | | |
| Batch number: 141540637001A | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 111 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 113 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141540637001B | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 141540638001 | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 99 | | 85-120 | | |
| Batch number: 14149039401A | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14154162401B | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155002 | Sample number(s): 7480411-7480413,7480415-7480418 | | | | | | | | | |
| 2378-TCDD | 0.0682 | J | 1.00 | 0.0586 | ng/kg | 94 | | 67-158 | | |
| 12378-PeCDD | 0.125 | J | 5.00 | 0.0398 | ng/kg | 101 | | 70-142 | | |
| 123478-HxCDD | 0.0634 | J | 5.00 | 0.0262 | ng/kg | 97 | | 70-164 | | |
| 123678-HxCDD | 0.0865 | J | 5.00 | 0.0274 | ng/kg | 93 | | 76-134 | | |
| 123789-HxCDD | 0.0648 | J | 5.00 | 0.0260 | ng/kg | 96 | | 64-162 | | |
| 1234678-HpCDD | 0.0654 | J | 5.00 | 0.0223 | ng/kg | 93 | | 70-140 | | |
| OCDD | 0.366 | J | 10.0 | 0.0258 | ng/kg | 93 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0492 | ng/kg | 106 | | 75-158 | | |
| 12378-PeCDF | 0.0628 | J | 5.00 | 0.0211 | ng/kg | 97 | | 80-134 | | |
| 23478-PeCDF | 0.151 | J | 5.00 | 0.0216 | ng/kg | 99 | | 68-160 | | |
| 123478-HxCDF | 0.113 | J | 5.00 | 0.0259 | ng/kg | 99 | | 72-134 | | |
| 123678-HxCDF | 0.0390 | J | 5.00 | 0.0208 | ng/kg | 99 | | 84-130 | | |
| 123789-HxCDF | 0.0951 | J | 5.00 | 0.0249 | ng/kg | 100 | | 78-130 | | |
| 234678-HxCDF | 0.0944 | J | 5.00 | 0.0232 | ng/kg | 100 | | 70-156 | | |
| 1234678-HpCDF | 0.0760 | J | 5.00 | 0.00697 | ng/kg | 93 | | 82-122 | | |
| 1234789-HpCDF | 0.129 | J | 5.00 | 0.0148 | ng/kg | 99 | | 78-138 | | |
| OCDF | 0.233 | J | 10.0 | 0.0446 | ng/kg | 97 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0671 | | | | ng/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14151SLE026 | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P479354 | | | | | | | | |
| Acenaphthene | 97 | 96 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 100 | 100 | 60-128 | 0 | 30 | | | | |
| Anthracene | 93 | 94 | 52-126 | 0 | 30 | | | | |
| Benzo(a)anthracene | 101 | 99 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 83 | 82 | 49-137 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 88 | 90 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 77 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 77 | 74 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 84 | 86 | 49-144 | 2 | 30 | | | | |
| Butylbenzylphthalate | 105 | 104 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 106 | 103 | 52-147 | 3 | 30 | | | | |
| Chrysene | 91 | 94 | 43-141 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 85 | 85 | 25-145 | 1 | 30 | | | | |
| Diethylphthalate | 89 | 91 | 66-140 | 2 | 30 | | | | |
| Dimethylphthalate | 85 | 84 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 119 | 112 | 48-164 | 6 | 30 | | | | |
| Fluoranthene | 94 | 117 | 38-153 | 20 | 30 | | | | |
| Fluorene | 81 | 80 | 57-130 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 81 | 79 | 26-139 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 90 | 91 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 95 | 46-147 | 1 | 30 | | | | |
| Naphthalene | 89 | 89 | 52-136 | 0 | 30 | | | | |
| N-Nitrosodimethylamine | 84 | 84 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 106 | 105 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 104 | 125 | 50-137 | 17 | 30 | | | | |
| Pyrene | 86 | 97 | 26-143 | 12 | 30 | | | | |
| Batch number: 14154A16A | Sample number(s): 7480412-7480413,7480416-7480418 UNSPK: P483434 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 72 | 77 | 69-123 | 6 | 30 | | | | |
| Batch number: 141530004A | Sample number(s): 7480411-7480413 UNSPK: P483434 | | | | | | | | |
| Aldrin | 94 | 85 | 16-126 | 10 | 50 | | | | |
| Alpha BHC | 93 | 86 | 14-140 | 8 | 50 | | | | |
| Beta BHC | 95 | 86 | 42-133 | 9 | 50 | | | | |
| Gamma BHC - Lindane | 96 | 88 | 30-137 | 9 | 50 | | | | |
| p,p-DDD | 109 | 99 | 43-149 | 10 | 50 | | | | |
| p,p-DDE | 112 | 103 | 35-152 | 9 | 50 | | | | |
| p,p-DDT | 107 | 98 | 12-193 | 9 | 50 | | | | |
| Delta BHC | 98 | 90 | 13-153 | 9 | 50 | | | | |
| Dieldrin | 100 | 88 | 41-153 | 12 | 50 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Endosulfan I | 91 | 83 | 26-146 | 9 | 50 | | | | |
| Endosulfan II | 96 | 88 | 34-141 | 9 | 50 | | | | |
| Endosulfan Sulfate | 96 | 89 | 10-181 | 7 | 50 | | | | |
| Endrin | 98 | 90 | 30-152 | 9 | 50 | | | | |
| Endrin Aldehyde | 88 | 82 | 23-138 | 6 | 50 | | | | |
| Endrin Ketone | 92 | 85 | 30-148 | 8 | 50 | | | | |
| Heptachlor | 95 | 87 | 16-152 | 9 | 50 | | | | |
| Heptachlor Epoxide | 99 | 90 | 33-144 | 10 | 50 | | | | |
| Methoxychlor | 106 | 97 | 41-161 | 8 | 50 | | | | |
| Batch number: 141610021A | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P492863 | | | | | | | | |
| PCB-1016 | 108 | 101 | 41-135 | 6 | 50 | | | | |
| PCB-1260 | 114 | 110 | 40-134 | 4 | 50 | | | | |
| Batch number: 141540006A | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P479354 | | | | | | | | |
| EFH (C12-C14) | 88 | 89 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 106 | 107 | 49-123 | 2 | 20 | | | | |
| EFH (C21-C30) | 77 | 81 | 49-123 | 2 | 20 | | | | |
| EFH (C30-C40) | 73 | 79 | 49-123 | 3 | 20 | | | | |
| EFH (C8-C11) | 85 | 83 | 49-123 | 2 | 20 | | | | |
| Batch number: 141540007A | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P479354 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 61 | 70 | 49-123 | 13 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 63 | 71 | 49-123 | 13 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 68 | 77 | 49-123 | 12 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 65 | 74 | 49-123 | 12 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 50 | 58 | 49-123 | 16 | 20 | | | | |
| Batch number: 141540637001 | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P483434 BKG: P483434 | | | | | | | | |
| Aluminum | 618 (2) | 1777 (2) | 75-125 | 20 | 20 | 9,070 | 8,860 | 2 | 20 |
| Antimony | 71* | 67* | 75-125 | 5 | 20 | 3.96 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 97 | 103 | 75-125 | 6 | 20 | 3.02 J | 6.16 | 68* (1) | 20 |
| Barium | 98 | 104 | 75-125 | 6 | 20 | 57.9 | 59.0 | 2 | 20 |
| Beryllium | 101 | 106 | 75-125 | 6 | 20 | 0.428 J | 0.442 J | 3 (1) | 20 |
| Boron | 95 | 96 | 75-125 | 4 | 20 | 1.67 J | 1.97 J | 16 (1) | 20 |
| Cadmium | 99 | 98 | 75-125 | 1 | 20 | 0.990 U | 0.971 U | 0 (1) | 20 |
| Calcium | 33 (2) | 209 (2) | 75-125 | 28* | 20 | 2,040 | 2,050 | 1 | 20 |
| Chromium | 92 | 109 | 75-125 | 13 | 20 | 8.95 | 9.36 | 5 (1) | 20 |
| Cobalt | 97 | 97 | 75-125 | 2 | 20 | 3.29 | 3.36 | 2 (1) | 20 |
| Copper | 100 | 115 | 75-125 | 14 | 20 | 4.22 | 4.58 | 8 (1) | 20 |
| Iron | -955 (2) | 2923 (2) | 75-125 | 23* | 20 | 15,500 | 16,300 | 6 | 20 |
| Lead | 92 | 106 | 75-125 | 12 | 20 | 4.72 | 5.01 | 6 (1) | 20 |
| Lithium | 103 | 106 | 75-125 | 4 | 20 | 21.4 | 22.7 | 6 | 20 |
| Magnesium | 44 (2) | 433 (2) | 75-125 | 21* | 20 | 3,190 | 3,350 | 5 | 20 |
| Manganese | 64 (2) | 106 (2) | 75-125 | 8 | 20 | 237 | 241 | 2 | 20 |
| Molybdenum | 97 | 97 | 75-125 | 2 | 20 | 0.294 J | 0.168 J | 55* (1) | 20 |
| Nickel | 98 | 99 | 75-125 | 3 | 20 | 5.52 | 5.42 | 2 (1) | 20 |
| Phosphorus | 75 | 166* | 75-125 | 21* | 20 | 318 | 338 | 6 | 20 |
| Potassium | 116 | 145* | 75-125 | 8 | 20 | 2,710 | 2,720 | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 3 | 20 | 68.0 J | 68.2 J | 0 (1) | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tin | 92 | 91 | 75-125 | 1 | 20 | 2.50 | J | 2.55 | J | 2 (1) | 20 |
| Titanium | 219 (2) | 305 (2) | 75-125 | 8 | 20 | 838 | | 884 | | 5 | 20 |
| Vanadium | 100 | 113 | 75-125 | 10 | 20 | 19.9 | | 21.1 | | 6 | 20 |
| Zinc | 96 | 117 | 75-125 | 11 | 20 | 54.1 | | 56.6 | | 4 | 20 |
| Zirconium | 102 | 102 | 75-125 | 2 | 20 | 1.85 | J | 2.67 | J | 36* (1) | 20 |
| Batch number: 141540637001A | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P483434 BKG: P483434 | | | | | | | | | | |
| Silver | 101 | 102 | 75-125 | 2 | 20 | 0.198 | U | 0.194 | U | 0 (1) | 20 |
| Strontium | 97 | 107 | 75-125 | 5 | 20 | 9.02 | | 9.92 | | 10 | 20 |
| Thallium | 103 | 99 | 75-125 | 1 | 20 | 0.216 | | 0.234 | | 8 (1) | 20 |
| Batch number: 141540637001B | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P483434 BKG: P483434 | | | | | | | | | | |
| Selenium | 106 | 109 | 75-125 | 4 | 20 | 0.396 | U | 0.133 | J | 200* (1) | 20 |
| Batch number: 141540638001 | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P483434 BKG: P483434 | | | | | | | | | | |
| 3a Mercury 7471A | 110 | 111 | 65-135 | 2 | 20 | 0.0157 | U | 0.0164 | U | 0 (1) | 20 |
| Batch number: 14149039401A | Sample number(s): 7480411-7480413,7480415-7480418 BKG: 7480411 | | | | | | | | | | |
| 15a pH by 9045D | | | | | | 4.52 | | 4.55 | | 1 | 3 |
| Batch number: 14154162401B | Sample number(s): 7480411-7480413,7480415-7480418 BKG: 7480416 | | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.7 | | 7.2 | | 6 | 20 |
| Batch number: 14155002 | Sample number(s): 7480411-7480413,7480415-7480418 UNSPK: P482508 | | | | | | | | | | |
| 2378-TCDD | 94 | 92 | 40-135 | 0 | 20 | | | | | | |
| 12378-PeCDD | 101 | 101 | 40-135 | 1 | 20 | | | | | | |
| 123478-HxCDD | 98 | 100 | 40-135 | 4 | 20 | | | | | | |
| 123678-HxCDD | 98 | 97 | 40-135 | 0 | 20 | | | | | | |
| 123789-HxCDD | 100 | 98 | 40-135 | 1 | 20 | | | | | | |
| 1234678-HpCDD | 99 | 95 | 40-135 | 3 | 20 | | | | | | |
| OCDD | 108 | 96 | 40-135 | 10 | 20 | | | | | | |
| 2378-TCDF | 104 | 103 | 40-135 | 0 | 20 | | | | | | |
| 12378-PeCDF | 104 | 101 | 40-135 | 2 | 20 | | | | | | |
| 23478-PeCDF | 100 | 101 | 40-135 | 2 | 20 | | | | | | |
| 123478-HxCDF | 101 | 103 | 40-135 | 3 | 20 | | | | | | |
| 123678-HxCDF | 104 | 104 | 40-135 | 2 | 20 | | | | | | |
| 123789-HxCDF | 101 | 104 | 40-135 | 4 | 20 | | | | | | |
| 234678-HxCDF | 101 | 101 | 40-135 | 1 | 20 | | | | | | |
| 1234678-HpCDF | 100 | 97 | 40-135 | 1 | 20 | | | | | | |
| 1234789-HpCDF | 102 | 100 | 40-135 | 1 | 20 | | | | | | |
| OCDF | 99 | 98 | 40-135 | 0 | 20 | | | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14151SLE026

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

## Surrogate Quality Control

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7480411 | 107 | 75 | 87 |
| 7480412 | 99 | 103 | 83 |
| 7480413 | 102 | 116 | 92 |
| 7480415 | 103 | 116 | 87 |
| 7480416 | 99 | 110 | 88 |
| 7480417 | 100 | 108 | 87 |
| 7480418 | 103 | 114 | 88 |
| Blank | 99 | 106 | 89 |
| LCS | 103 | 119* | 89 |
| MS | 96 | 106 | 88 |
| MSD | 99 | 107 | 87 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14150B94A

| | Trifluorotoluene-F |
|---|---|
| 7480414 | 82 |
| Blank | 81 |
| LCS | 91 |
| LCSD | 85 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14154A16A

| | Trifluorotoluene-F |
|---|---|
| 7480412 | 94 |
| 7480413 | 90 |
| 7480416 | 86 |
| 7480417 | 100 |
| 7480418 | 92 |
| Blank | 90 |
| LCS | 96 |
| MS | 83 |
| MSD | 87 |
| Limits: | 50-142 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141530004A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7480411 | 81 | 80 |
| 7480412 | 81 | 86 |
| 7480413 | 90 | 89 |
| Blank | 90 | 100 |
| LCS | 92 | 105 |
| MS | 94 | 102 |
| MSD | 85 | 92 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

## Surrogate Quality Control

Limits: 50-130 20-120

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141610021A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7480411 | 101 | 102 |
| 7480412 | 115 | 105 |
| 7480413 | 118 | 110 |
| 7480415 | 115 | 104 |
| 7480416 | 115 | 109 |
| 7480417 | 114 | 109 |
| 7480418 | 112 | 111 |
| Blank | 111 | 109 |
| LCS | 113 | 107 |
| LCSD | 118 | 111 |
| MS | 114 | 109 |
| MSD | 107 | 104 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141540006A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7480411 | 116 | 80 |
| 7480412 | 85 | 85 |
| 7480413 | 76 | 92 |
| 7480415 | 70 | 85 |
| 7480416 | 82 | 82 |
| 7480417 | 76 | 92 |
| 7480418 | 79 | 76 |
| Blank | 74 | 88 |
| LCS | 76 | 91 |
| MS | 78 | 87 |
| MSD | 92 | 87 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141540007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7480411 | 64 | 80 |
| 7480412 | 60 | 70 |
| 7480413 | 57 | 59* |
| 7480415 | 65 | 69 |
| 7480416 | 60 | 60* |
| 7480417 | 64 | 76 |
| 7480418 | 59 | 68 |
| Blank | 50 | 54* |
| LCS | 62 | 67 |
| MS | 58 | 61* |
| MSD | 66 | 69 |
| Limits: | 37-125 | 66-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477802
Reported: 06/12/14 at 02:09 PM

## Surrogate Quality Control

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14155002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7480411 | 81 | 79 | 86 | 85 | 85 | 89 |
| 7480412 | 71 | 77 | 82 | 85 | 82 | 86 |
| 7480413 | 79 | 78 | 86 | 86 | 91 | 88 |
| 7480415 | 80 | 80 | 85 | 88 | 91 | 92 |
| 7480416 | 75 | 80 | 81 | 83 | 85 | 87 |
| 7480417 | 83 | 85 | 90 | 92 | 95 | 97 |
| 7480418 | 83 | 85 | 89 | 89 | 92 | 93 |
| Blank | 71 | 83 | 90 | 91 | 90 | 98 |
| MS | 79 | 86 | 88 | 88 | 86 | 87 |
| MSD | 84 | 82 | 89 | 90 | 93 | 98 |
| OPR | 65 | 79 | 83 | 84 | 83 | 88 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7480411 | 91 | 77 | 84 | 78 | 81 | 86 |
| 7480412 | 95 | 69 | 82 | 76 | 75 | 87 |
| 7480413 | 95 | 74 | 86 | 78 | 79 | 88 |
| 7480415 | 100 | 80 | 83 | 84 | 86 | 89 |
| 7480416 | 91 | 70 | 84 | 76 | 73 | 85 |
| 7480417 | 108 | 78 | 91 | 85 | 84 | 94 |
| 7480418 | 101 | 78 | 91 | 83 | 85 | 95 |
| Blank | 103 | 60 | 83 | 72 | 71 | 87 |
| MS | 93 | 79 | 86 | 92 | 86 | 88 |
| MSD | 101 | 83 | 89 | 88 | 90 | 93 |
| OPR | 88 | 62 | 79 | 72 | 67 | 81 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7480411 | 82 | 84 | 104 | 73 | 70 |
| 7480412 | 76 | 75 | 109 | 65 | 64 |
| 7480413 | 81 | 86 | 112 | 69 | 66 |
| 7480415 | 87 | 92 | 100 | 82 | 83 |
| 7480416 | 75 | 71 | 115 | 60 | 56 |
| 7480417 | 86 | 90 | 121 | 76 | 76 |
| 7480418 | 88 | 92 | 119 | 76 | 74 |
| Blank | 78 | 76 | 126 | 67 | 65 |
| MS | 90 | 92 | 100 | 89 | 88 |
| MSD | 95 | 99 | 113 | 94 | 91 |
| OPR | 71 | 61 | 106 | 60 | 56 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/28/2014
CarrierName: FedEx
AirbillNo: 770118975080

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

A-13013 G-1477802 S-7480411-18

COC No: 20140528-07
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-699-SA5B-TR-0.5 | 5/28/14 10:00 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | X | | | | X | | | | | | | | | | | | | | | |
| SL-699-SA5B-TR-3.0 | 5/28/14 10:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | X | | | | X | | | | | | | | | | | | | | | |
| SL-699-SA5B-TR-3.0 | 5/28/14 10:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-3.0 | 5/28/14 08:35 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | X | | | | X | | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-3.0 | 5/28/14 08:35 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| TB3-052814 | 5/28/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-0.5 | 5/28/14 13:05 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-2.0 | 5/28/14 14:05 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-2.0 | 5/28/14 14:05 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-3.0 | 5/28/14 14:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-3.0 | 5/28/14 14:15 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-11.0 | 5/28/14 14:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-11.0 | 5/28/14 14:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | X | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH. Morpholine only on TIC.

**Sampler:** Andrew Payne

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/28/14 | 1600 | [signature] | | | [signature] | | | [signature] | | |
| [signature] | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/29/14 | 0935 |

TRENCHING

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15826

Group Number(s): 1477802

Client: CDM SMITH

## SSFL PHASE 3

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/29/2014 9:35 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | Yes | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Corey Eshleman (3647) at 10:53 on 05/29/2014

### Samples Chilled Details: SSFL PHASE 3

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 2 | DT121 | 0.7 | DT | Wet | Y | Bagged | N | N |
| 3 | DT121 | 1.2 | DT | Wet | Y | Bagged | N | N |

### Extra Sample Details: SSFL PHASE 3

| Sample ID on Label | Number of Extra Containers | Date on Label | Comments |
|---|---|---|---|
| SL-699-SA5B-TR-8.0 | 4 | 5/28/2014 11:00 | 2 ENCORE/ 2 (16oz) GLASS |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 12, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/29/2014
Group Number: 1477916
SDG: PH204
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-699-SA5B-TR-8.0 Soil | 7480929 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SL-699-SA5B-TR-8.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7480929**
**LL Group # 1477916**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 11:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:10

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

6995B SDG#: PH204-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 23.06 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.3 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.89 | U | 0.89 | 0.48 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.89 | U | 0.89 | 0.24 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SL-699-SA5B-TR-8.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7480929**
**LL Group # 1477916**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 11:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:10

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

6995B SDG#: PH204-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.64 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.89 | U | 0.89 | 0.18 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.2 | U | 7.2 | 1.8 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.1 | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 18,400 | | 42.0 | 7.57 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.20 | U | 4.20 | 0.777 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.38 | | 4.20 | 0.735 | 1 |
| 06946 | Barium | 7440-39-3 | 85.4 | | 1.05 | 0.0346 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.826 | J | 1.05 | 0.0703 | 1 |
| 07914 | Boron | 7440-42-8 | 1.23 | J | 10.5 | 0.882 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.05 | U | 1.05 | 0.0798 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,700 | | 21.0 | 3.51 | 1 |
| 06951 | Chromium | 7440-47-3 | 25.6 | | 3.15 | 0.168 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.95 | | 1.05 | 0.104 | 1 |
| 06953 | Copper | 7440-50-8 | 12.7 | | 2.10 | 0.304 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480929**
**LL Group # 1477916**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 11:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:10

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

6995B SDG#: PH204-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01654 | Iron | 7439-89-6 | 25,400 | | 42.0 | 3.80 | 1 |
| 06955 | Lead | 7439-92-1 | 6.90 | | 3.15 | 0.525 | 1 |
| 01656 | Lithium | 7439-93-2 | 31.8 | | 4.2 | 0.36 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,660 | | 10.5 | 1.75 | 1 |
| 06958 | Manganese | 7439-96-5 | 233 | | 1.05 | 0.0871 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.10 | U | 2.10 | 0.178 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.8 | | 2.10 | 0.136 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 216 | | 10.5 | 3.03 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,240 | | 105 | 8.75 | 1 |
| 01667 | Sodium | 7440-23-5 | 142 | | 105 | 17.5 | 1 |
| 06969 | Tin | 7440-31-5 | 3.08 | J | 10.5 | 0.231 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,220 | | 1.05 | 0.178 | 1 |
| 06971 | Vanadium | 7440-62-2 | 45.5 | | 1.05 | 0.136 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.3 | | 4.20 | 0.210 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.87 | J | 5.25 | 0.882 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.420 | U | 0.420 | 0.105 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0668 | J | 0.210 | 0.0273 | 2 |
| 06144 | Strontium | 7440-24-6 | 23.1 | | 0.420 | 0.0714 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.290 | | 0.210 | 0.0315 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0171 | U | 0.0171 | 0.0103 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.46 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 21.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480929**
**LL Group # 1477916**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 11:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:10

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

6995B SDG#: PH204-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0563 JBQ | 1.07 | 0.0398 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0776 JBQ | 5.33 | 0.0349 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0350 JBQ | 5.33 | 0.0221 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0319 JBQ | 5.33 | 0.0226 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0661 JBQ | 5.33 | 0.0231 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.128 JBQ | 5.33 | 0.0207 | 1 |
| 11031 | OCDD | 3268-87-9 | 0.667 JBQ | 10.7 | 0.0283 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.07 U | 1.07 | 0.0347 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0726 JBQ | 5.33 | 0.0162 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0439 JBQ | 5.33 | 0.0178 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0385 JBQ | 5.33 | 0.0205 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0439 JBQ | 5.33 | 0.0175 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0885 JBQ | 5.33 | 0.0262 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0557 JBQ | 5.33 | 0.0194 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0529 JBQ | 5.33 | 0.00633 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0406 JBQ | 5.33 | 0.0170 | 1 |
| 11031 | OCDF | 39001-02-0 | 0.261 JBQ | 10.7 | 0.0548 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | U | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 67 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 79 | 28 - 130 |
| 13C12-1234678-HpCDD | 81 | 23 - 140 |
| 13C12-OCDD | 84 | 17 - 157 |
| 13C12-2378-TCDF | 61 | 24 - 169 |
| 13C12-12378-PeCDF | 80 | 24 - 185 |
| 13C12-23478-PeCDF | 67 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 69 | 28 - 136 |
| 13C12-123789-HxCDF | 59 | 29 - 147 |
| 13C12-1234678-HpCDF | 115 | 28 - 143 |
| 13C12-1234789-HpCDF | 49 | 26 - 138 |
| 13C12-OCDF | 42 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480929**
**LL Group # 1477916**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 11:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:10

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

6995B SDG#: PH204-09*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480929**
**LL Group # 1477916**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 11:00 by AP

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

6995B SDG#: PH204-09*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 12:41 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 03:51 | Laura M Krieger | 23.06 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201414934653 | 05/29/2014 17:15 | Lois E Hiltz | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201414934653 | 05/29/2014 17:15 | Lois E Hiltz | n.a. |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 09:35 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 22:31 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 2 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 01:22 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 20:04 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14155002 | 06/06/2014 10:13 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14155002 | 06/04/2014 11:45 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SL-699-SA5B-TR-8.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7480929**
**LL Group # 1477916**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/28/2014 11:00 by AP

Submitted: 05/29/2014 09:35
Reported: 06/12/2014 14:10

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

6995B SDG#: PH204-09*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:10 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:49 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:49 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:49 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:49 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:27 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14149039401A | 05/29/2014 20:15 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14154162401B | 06/03/2014 19:40 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14151SLE026 | Sample number(s): 7480929 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 79* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 81 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 86 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 80-119 | | |
| Batch number: 14154A16A | Sample number(s): 7480929 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 141530004A | Sample number(s): 7480929 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 86 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 88 | | 55-135 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 89 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 56-138 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 100 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 89 | | 59-137 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 68-134 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 88 | | 56-128 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 68-128 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 85 | | 61-125 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 89 | | 69-126 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 89 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 94 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 100 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141610021A | Sample number(s): 7480929 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 87 | 89 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 106 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 110 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141540006A | Sample number(s): 7480929 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 87 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 60-115 | | |
| Batch number: 141540007A | Sample number(s): 7480929 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 66* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 54 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 54* | | 60-115 | | |
| Batch number: 141540637001 | Sample number(s): 7480929 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 105 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 106 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 9.64 | J | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 105 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 107 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 105 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Nickel | 2.00 U | 2.00 | 0.130 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 10.0 U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.45 J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 U | 1.00 | 0.130 | mg/kg | 108 | | 80-120 | | |
| Zinc | 4.00 U | 4.00 | 0.200 | mg/kg | 104 | | 80-120 | | |
| Zirconium | 5.00 U | 5.00 | 0.840 | mg/kg | 106 | | 80-120 | | |
| Batch number: 141540637001A | Sample number(s): 7480929 | | | | | | | | |
| Silver | 0.200 U | 0.200 | 0.0260 | mg/kg | 111 | | 80-120 | | |
| Strontium | 0.400 U | 0.400 | 0.0680 | mg/kg | 113 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141540637001B | Sample number(s): 7480929 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 141540638001 | Sample number(s): 7480929 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 99 | | 85-120 | | |
| Batch number: 14149039401A | Sample number(s): 7480929 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14154162401B | Sample number(s): 7480929 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14155002 | Sample number(s): 7480929 | | | | | | | | |
| 2378-TCDD | 0.0682 J | 1.00 | 0.0586 | ng/kg | 94 | | 67-158 | | |
| 12378-PeCDD | 0.125 J | 5.00 | 0.0398 | ng/kg | 101 | | 70-142 | | |
| 123478-HxCDD | 0.0634 J | 5.00 | 0.0262 | ng/kg | 97 | | 70-164 | | |
| 123678-HxCDD | 0.0865 J | 5.00 | 0.0274 | ng/kg | 93 | | 76-134 | | |
| 123789-HxCDD | 0.0648 J | 5.00 | 0.0260 | ng/kg | 96 | | 64-162 | | |
| 1234678-HpCDD | 0.0654 J | 5.00 | 0.0223 | ng/kg | 93 | | 70-140 | | |
| OCDD | 0.366 J | 10.0 | 0.0258 | ng/kg | 93 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0492 | ng/kg | 106 | | 75-158 | | |
| 12378-PeCDF | 0.0628 J | 5.00 | 0.0211 | ng/kg | 97 | | 80-134 | | |
| 23478-PeCDF | 0.151 J | 5.00 | 0.0216 | ng/kg | 99 | | 68-160 | | |
| 123478-HxCDF | 0.113 J | 5.00 | 0.0259 | ng/kg | 99 | | 72-134 | | |
| 123678-HxCDF | 0.0390 J | 5.00 | 0.0208 | ng/kg | 99 | | 84-130 | | |
| 123789-HxCDF | 0.0951 J | 5.00 | 0.0249 | ng/kg | 100 | | 78-130 | | |
| 234678-HxCDF | 0.0944 J | 5.00 | 0.0232 | ng/kg | 100 | | 70-156 | | |
| 1234678-HpCDF | 0.0760 J | 5.00 | 0.00697 | ng/kg | 93 | | 82-122 | | |
| 1234789-HpCDF | 0.129 J | 5.00 | 0.0148 | ng/kg | 99 | | 78-138 | | |
| OCDF | 0.233 J | 10.0 | 0.0446 | ng/kg | 97 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0671 | | | ng/kg | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14151SLE026 | Sample number(s): 7480929 UNSPK: P479354 | | | | | | | | |
| Acenaphthene | 97 | 96 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 100 | 100 | 60-128 | 0 | 30 | | | | |
| Anthracene | 93 | 94 | 52-126 | 0 | 30 | | | | |
| Benzo(a)anthracene | 101 | 99 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 83 | 82 | 49-137 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 88 | 90 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 77 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 77 | 74 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 84 | 86 | 49-144 | 2 | 30 | | | | |
| Butylbenzylphthalate | 105 | 104 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 106 | 103 | 52-147 | 3 | 30 | | | | |
| Chrysene | 91 | 94 | 43-141 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 85 | 85 | 25-145 | 1 | 30 | | | | |
| Diethylphthalate | 89 | 91 | 66-140 | 2 | 30 | | | | |
| Dimethylphthalate | 85 | 84 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 119 | 112 | 48-164 | 6 | 30 | | | | |
| Fluoranthene | 94 | 117 | 38-153 | 20 | 30 | | | | |
| Fluorene | 81 | 80 | 57-130 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 81 | 79 | 26-139 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 90 | 91 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 95 | 46-147 | 1 | 30 | | | | |
| Naphthalene | 89 | 89 | 52-136 | 0 | 30 | | | | |
| N-Nitrosodimethylamine | 84 | 84 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 106 | 105 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 104 | 125 | 50-137 | 17 | 30 | | | | |
| Pyrene | 86 | 97 | 26-143 | 12 | 30 | | | | |
| Batch number: 14154A16A | Sample number(s): 7480929 UNSPK: P483434 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 72 | 77 | 69-123 | 6 | 30 | | | | |
| Batch number: 141530004A | Sample number(s): 7480929 UNSPK: P483434 | | | | | | | | |
| Aldrin | 94 | 85 | 16-126 | 10 | 50 | | | | |
| Alpha BHC | 93 | 86 | 14-140 | 8 | 50 | | | | |
| Beta BHC | 95 | 86 | 42-133 | 9 | 50 | | | | |
| Gamma BHC - Lindane | 96 | 88 | 30-137 | 9 | 50 | | | | |
| p,p-DDD | 109 | 99 | 43-149 | 10 | 50 | | | | |
| p,p-DDE | 112 | 103 | 35-152 | 9 | 50 | | | | |
| p,p-DDT | 107 | 98 | 12-193 | 9 | 50 | | | | |
| Delta BHC | 98 | 90 | 13-153 | 9 | 50 | | | | |
| Dieldrin | 100 | 88 | 41-153 | 12 | 50 | | | | |
| Endosulfan I | 91 | 83 | 26-146 | 9 | 50 | | | | |
| Endosulfan II | 96 | 88 | 34-141 | 9 | 50 | | | | |
| Endosulfan Sulfate | 96 | 89 | 10-181 | 7 | 50 | | | | |
| Endrin | 98 | 90 | 30-152 | 9 | 50 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Endrin Aldehyde | 88 | 82 | 23-138 | 6 | 50 | | | | |
| Endrin Ketone | 92 | 85 | 30-148 | 8 | 50 | | | | |
| Heptachlor | 95 | 87 | 16-152 | 9 | 50 | | | | |
| Heptachlor Epoxide | 99 | 90 | 33-144 | 10 | 50 | | | | |
| Methoxychlor | 106 | 97 | 41-161 | 8 | 50 | | | | |
| Batch number: 141610021A | Sample number(s): 7480929 UNSPK: P492863 | | | | | | | | |
| PCB-1016 | 108 | 101 | 41-135 | 6 | 50 | | | | |
| PCB-1260 | 114 | 110 | 40-134 | 4 | 50 | | | | |
| Batch number: 141540006A | Sample number(s): 7480929 UNSPK: P479354 | | | | | | | | |
| EFH (C12-C14) | 88 | 89 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 106 | 107 | 49-123 | 2 | 20 | | | | |
| EFH (C21-C30) | 77 | 81 | 49-123 | 2 | 20 | | | | |
| EFH (C30-C40) | 73 | 79 | 49-123 | 3 | 20 | | | | |
| EFH (C8-C11) | 85 | 83 | 49-123 | 2 | 20 | | | | |
| Batch number: 141540007A | Sample number(s): 7480929 UNSPK: P479354 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 61 | 70 | 49-123 | 13 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 63 | 71 | 49-123 | 13 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 68 | 77 | 49-123 | 12 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 65 | 74 | 49-123 | 12 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 50 | 58 | 49-123 | 16 | 20 | | | | |
| Batch number: 141540637001 | Sample number(s): 7480929 UNSPK: P483434 BKG: P483434 | | | | | | | | |
| Aluminum | 618 (2) | 1777 (2) | 75-125 | 20 | 20 | 9,070 | 8,860 | 2 | 20 |
| Antimony | 71* | 67* | 75-125 | 5 | 20 | 3.96 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 97 | 103 | 75-125 | 6 | 20 | 3.02 J | 6.16 | 68* (1) | 20 |
| Barium | 98 | 104 | 75-125 | 6 | 20 | 57.9 | 59.0 | 2 | 20 |
| Beryllium | 101 | 106 | 75-125 | 6 | 20 | 0.428 J | 0.442 J | 3 (1) | 20 |
| Boron | 95 | 96 | 75-125 | 4 | 20 | 1.67 J | 1.97 J | 16 (1) | 20 |
| Cadmium | 99 | 98 | 75-125 | 1 | 20 | 0.990 U | 0.971 U | 0 (1) | 20 |
| Calcium | 33 (2) | 209 (2) | 75-125 | 28* | 20 | 2,040 | 2,050 | 1 | 20 |
| Chromium | 92 | 109 | 75-125 | 13 | 20 | 8.95 | 9.36 | 5 (1) | 20 |
| Cobalt | 97 | 97 | 75-125 | 2 | 20 | 3.29 | 3.36 | 2 (1) | 20 |
| Copper | 100 | 115 | 75-125 | 14 | 20 | 4.22 | 4.58 | 8 (1) | 20 |
| Iron | -955 (2) | 2923 (2) | 75-125 | 23* | 20 | 15,500 | 16,300 | 6 | 20 |
| Lead | 92 | 106 | 75-125 | 12 | 20 | 4.72 | 5.01 | 6 (1) | 20 |
| Lithium | 103 | 106 | 75-125 | 4 | 20 | 21.4 | 22.7 | 6 | 20 |
| Magnesium | 44 (2) | 433 (2) | 75-125 | 21* | 20 | 3,190 | 3,350 | 5 | 20 |
| Manganese | 64 (2) | 106 (2) | 75-125 | 8 | 20 | 237 | 241 | 2 | 20 |
| Molybdenum | 97 | 97 | 75-125 | 2 | 20 | 0.294 J | 0.168 J | 55* (1) | 20 |
| Nickel | 98 | 99 | 75-125 | 3 | 20 | 5.52 | 5.42 | 2 (1) | 20 |
| Phosphorus | 75 | 166* | 75-125 | 21* | 20 | 318 | 338 | 6 | 20 |
| Potassium | 116 | 145* | 75-125 | 8 | 20 | 2,710 | 2,720 | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 3 | 20 | 68.0 J | 68.2 J | 0 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 1 | 20 | 2.50 J | 2.55 J | 2 (1) | 20 |
| Titanium | 219 (2) | 305 (2) | 75-125 | 8 | 20 | 838 | 884 | 5 | 20 |
| Vanadium | 100 | 113 | 75-125 | 10 | 20 | 19.9 | 21.1 | 6 | 20 |
| Zinc | 96 | 117 | 75-125 | 11 | 20 | 54.1 | 56.6 | 4 | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Zirconium | 102 | 102 | 75-125 | 2 | 20 | 1.85 | J | 2.67 | J | 36* (1) | 20 |
| Batch number: 141540637001A | Sample number(s): 7480929 UNSPK: P483434 BKG: P483434 | | | | | | | | | | |
| Silver | 101 | 102 | 75-125 | 2 | 20 | 0.198 | U | 0.194 | U | 0 (1) | 20 |
| Strontium | 97 | 107 | 75-125 | 5 | 20 | 9.02 | | 9.92 | | 10 | 20 |
| Thallium | 103 | 99 | 75-125 | 1 | 20 | 0.216 | | 0.234 | | 8 (1) | 20 |
| Batch number: 141540637001B | Sample number(s): 7480929 UNSPK: P483434 BKG: P483434 | | | | | | | | | | |
| Selenium | 106 | 109 | 75-125 | 4 | 20 | 0.396 | U | 0.133 | J | 200* (1) | 20 |
| Batch number: 141540638001 | Sample number(s): 7480929 UNSPK: P483434 BKG: P483434 | | | | | | | | | | |
| 3a Mercury 7471A | 110 | 111 | 65-135 | 2 | 20 | 0.0157 | U | 0.0164 | U | 0 (1) | 20 |
| Batch number: 14149039401A | Sample number(s): 7480929 BKG: P480411 | | | | | | | | | | |
| 15a pH by 9045D | | | | | | 4.52 | | 4.55 | | 1 | 3 |
| Batch number: 14154162401B | Sample number(s): 7480929 BKG: P480416 | | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 7.7 | | 7.2 | | 6 | 20 |
| Batch number: 14155002 | Sample number(s): 7480929 UNSPK: P482508 | | | | | | | | | | |
| 2378-TCDD | 94 | 92 | 40-135 | 0 | 20 | | | | | | |
| 12378-PeCDD | 101 | 101 | 40-135 | 1 | 20 | | | | | | |
| 123478-HxCDD | 98 | 100 | 40-135 | 4 | 20 | | | | | | |
| 123678-HxCDD | 98 | 97 | 40-135 | 0 | 20 | | | | | | |
| 123789-HxCDD | 100 | 98 | 40-135 | 1 | 20 | | | | | | |
| 1234678-HpCDD | 99 | 95 | 40-135 | 3 | 20 | | | | | | |
| OCDD | 108 | 96 | 40-135 | 10 | 20 | | | | | | |
| 2378-TCDF | 104 | 103 | 40-135 | 0 | 20 | | | | | | |
| 12378-PeCDF | 104 | 101 | 40-135 | 2 | 20 | | | | | | |
| 23478-PeCDF | 100 | 101 | 40-135 | 2 | 20 | | | | | | |
| 123478-HxCDF | 101 | 103 | 40-135 | 3 | 20 | | | | | | |
| 123678-HxCDF | 104 | 104 | 40-135 | 2 | 20 | | | | | | |
| 123789-HxCDF | 101 | 104 | 40-135 | 4 | 20 | | | | | | |
| 234678-HxCDF | 101 | 101 | 40-135 | 1 | 20 | | | | | | |
| 1234678-HpCDF | 100 | 97 | 40-135 | 1 | 20 | | | | | | |
| 1234789-HpCDF | 102 | 100 | 40-135 | 1 | 20 | | | | | | |
| OCDF | 99 | 98 | 40-135 | 0 | 20 | | | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14151SLE026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7480929 | 99 | 114 | 89 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| Blank | 99 | 106 | 89 |
| LCS | 103 | 119* | 89 |
| MS | 96 | 106 | 88 |
| MSD | 99 | 107 | 87 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14154A16A

| | Trifluorotoluene-F |
|---|---|
| 7480929 | 90 |
| Blank | 90 |
| LCS | 96 |
| MS | 83 |
| MSD | 87 |
| Limits: | 50-142 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141530004A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7480929 | 89 | 79 |
| Blank | 90 | 100 |
| LCS | 92 | 105 |
| MS | 94 | 102 |
| MSD | 85 | 92 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141610021A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7480929 | 110 | 110 |
| Blank | 111 | 109 |
| LCS | 113 | 107 |
| LCSD | 118 | 111 |
| MS | 114 | 109 |
| MSD | 107 | 104 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141540006A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7480929 | 73 | 88 |
| Blank | 74 | 88 |
| LCS | 76 | 91 |
| MS | 78 | 87 |
| MSD | 92 | 87 |
| Limits: | 37-125 | 66-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1477916
Reported: 06/12/14 at 02:10 PM

## Surrogate Quality Control

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141540007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7480929 | 63 | 70 |
| Blank | 50 | 54* |
| LCS | 62 | 67 |
| MS | 58 | 61* |
| MSD | 66 | 69 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14155002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7480929 | 67 | 74 | 79 | 80 | 79 | 81 |
| Blank | 71 | 83 | 90 | 91 | 90 | 98 |
| MS | 79 | 86 | 88 | 88 | 86 | 87 |
| MSD | 84 | 82 | 89 | 90 | 93 | 98 |
| OPR | 65 | 79 | 83 | 84 | 83 | 88 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7480929 | 84 | 61 | 80 | 67 | 67 | 81 |
| Blank | 103 | 60 | 83 | 72 | 71 | 87 |
| MS | 93 | 79 | 86 | 92 | 86 | 88 |
| MSD | 101 | 83 | 89 | 88 | 90 | 93 |
| OPR | 88 | 62 | 79 | 72 | 67 | 81 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7480929 | 69 | 59 | 115 | 49 | 42 |
| Blank | 78 | 76 | 126 | 67 | 65 |
| MS | 90 | 92 | 100 | 89 | 88 |
| MSD | 95 | 99 | 113 | 94 | 91 |
| OPR | 71 | 61 | 106 | 60 | 56 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/28/2014
CarrierName: FedEx
AirbillNo: 770118975080

A-13013
G-1477916
S-7480929

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140528-07
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc. Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-699-SA5B-TR-0.5 | 5/28/14 10:00 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-699-SA5B-TR-3.0 | 5/28/14 10:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-699-SA5B-TR-3.0 | 5/28/14 10:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-3.0 | 5/28/14 08:35 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | | X | | | | | | | | | | | | | | |
| SL-693-SA5B-TR-3.0 | 5/28/14 08:35 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| TB3-052814 | 5/28/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-0.5 | 5/28/14 13:05 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-2.0 | 5/28/14 14:05 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-2.0 | 5/28/14 14:05 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-3.0 | 5/28/14 14:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-3.0 | 5/28/14 14:15 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-11.0 | 5/28/14 14:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-529-SA5B-TR-11.0 | 5/28/14 14:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | X | X | | X | X | | | X | | | | | | | | | X | | | | | | | | | | | | | | |
| SL-699-SA5B-TR-8.0 | 5/28/14 11:00 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | | | X | | | | X | | | | | X | | | | | | | | | | | | | | |
| SL-699-SA5B-TR-8.0 | 5/28/14 11:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH. Morpholine only on TIC.

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

G-147916

**Nicole Maljovec**

**From:** Treadway, Whitney A. <treadwaywa@cdmsmith.com>
**Sent:** Thursday, May 29, 2014 1:14 PM
**To:** Nicole Maljovec
**Cc:** Hartman, Pamela
**Subject:** RE: Received sample not on COC- SL-699-SA5B-TR-8.0
**Attachments:** Lancaster 052814 COC(7).pdf

Nicole,

I'm sorry about that. I've attached an updated COC with this sample added. Yes please follow this COC for analytes, including pesticides.

Thank you,

Whitney

Whitney Treadway
CDM Smith
111 Academy Way
Suite 150
Irvine, CA 92617
Direct: 949-930-9889
Main: 949-752-5452
Email: treadwaywa@cdmsmith.com<mailto:treadwaywa@cdmsmith.com>

---

From: Hartman, Pamela
Sent: Thursday, May 29, 2014 10:06 AM
To: Treadway, Whitney A.
Subject: FW: Received sample not on COC- SL-699-SA5B-TR-8.0

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15826

Group Number(s): ~~1477802~~ 1477916

Client: CDM SMITH

## SSFL PHASE 3

OWL 5/29/14 (3)

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/29/2014 9:35 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | Yes | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Corey Eshleman (3647) at 10:53 on 05/29/2014

### Samples Chilled Details: SSFL PHASE 3

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 2 | DT121 | 0.7 | DT | Wet | Y | Bagged | N | N |
| 3 | DT121 | 1.2 | DT | Wet | Y | Bagged | N | N |

### Extra Sample Details: SSFL PHASE 3

| Sample ID on Label | Number of Extra Containers | Date on Label | Comments |
|---|---|---|---|
| SL-699-SA5B-TR-8.0 | 4 | 5/28/2014 11:00 | 2 ENCORE/ 2 (16oz) GLASS |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 09, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/30/2014
Group Number: 1478173
SDG: PH206
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-557-SA5C-SB-3.0-3.5 Soil | 7482076 |
| TB2-052914 Water | 7482077 |
| SVL-559-SA5C-SB-2.5-3.0 Soil | 7482078 |
| EB2-052914 Water | 7482079 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SVL-557-SA5C-SB-3.0-3.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7482076**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 10:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55730 SDG#: PH206-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 23 | U | 23 | 8 | 1.07 |
| 10237 | Acrolein | 107-02-8 | 120 | U | 120 | 23 | 1.07 |
| 10237 | Acrylonitrile | 107-13-1 | 23 | U | 23 | 5 | 1.07 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 1.07 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Butanone | 78-93-3 | 12 | U | 12 | 5 | 1.07 |
| 10237 | t-Butyl alcohol | 75-65-0 | 59 | U | 59 | 23 | 1.07 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 12 | U | 12 | 2 | 1.07 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 1.07 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 1.07 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 2-Hexanone | 591-78-6 | 12 | U | 12 | 4 | 1.07 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-557-SA5C-SB-3.0-3.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7482076**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 10:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55730 SDG#: PH206-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 4 | 1.07 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 1.07 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 12 | U | 12 | 4 | 1.07 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 1.07 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 1.07 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 1.07 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 1.07 |
| 10237 | Vinyl Acetate | 108-05-4 | 12 | U | 12 | 2 | 1.07 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 1.07 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 1.07 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 1.07 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 20:00 | Andrea E Lando | 1.07 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 1 | 201415034663 | 05/30/2014 15:36 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-557-SA5C-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482076**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 10:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55730 SDG#: PH206-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 2 | 201415034663 | 05/30/2014 15:36 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035 | 1 | 201415034663 | 05/30/2014 15:20 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401A | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482077**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:00

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB229 SDG#: PH206-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482077**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:00

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB229 SDG#: PH206-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141551AA | 06/04/2014 12:07 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141551AA | 06/04/2014 12:07 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-559-SA5C-SB-2.5-3.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7482078**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 10:35 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55925 SDG#: PH206-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.96 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.96 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.96 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.96 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.96 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.96 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.96 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.96 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.96 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.96 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.96 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.96 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-559-SA5C-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482078**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 10:35 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55925 SDG#: PH206-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.96 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.96 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.96 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.96 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.96 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.96 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 20:22 | Andrea E Lando | 0.96 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 1 | 201415034663 | 05/30/2014 15:36 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-559-SA5C-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482078**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 10:35 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55925 SDG#: PH206-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035 | 2 | 201415034663 | 05/30/2014 15:36 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035 | 1 | 201415034663 | 05/30/2014 15:18 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401A | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482079**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB229 SDG#: PH206-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482079**
**LL Group # 1478173**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/09/2014 12:41

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB229 SDG#: PH206-04EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141551AA | 06/04/2014 12:28 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141551AA | 06/04/2014 12:28 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478173
Reported: 06/09/14 at 12:41 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141562AA | Sample number(s): 7482076,7482078 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 99 | 100 | 41-149 | 1 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 81 | 94 | 50-137 | 15 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 96 | 91 | 58-123 | 6 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 97 | 99 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 102 | 100 | 80-120 | 2 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 2 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 106 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 75-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 101 | 102 | 70-126 | 1 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 100 | 94 | 32-162 | 5 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 92 | 93 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 100 | 107 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 72-120 | 0 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 104 | 101 | 69-120 | 3 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 75-120 | 0 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 104 | 96 | 63-128 | 8 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 104 | 102 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | 105 | 80-120 | 3 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 95 | 89 | 17-171 | 6 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 83 | 85 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 70-130 | 1 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 93 | 90 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 104 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 101 | 105 | 79-120 | 3 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 81 | 79 | 22-131 | 2 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 93 | 97 | 50-132 | 4 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 103 | 106 | 77-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 75-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 103 | 103 | 80-120 | 0 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 26-137 | 3 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 98 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 106 | 108 | 66-136 | 2 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 102 | 73-129 | 8 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 103 | 79-120 | 8 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 98 | 98 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 101 | 73-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478173
Reported: 06/09/14 at 12:41 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 103 | 104 | 77-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 96 | 74-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 101 | 100 | 69-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 95 | 98 | 59-134 | 3 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 2 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 102 | 95 | 64-137 | 7 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 96 | 100 | 46-130 | 5 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 90 | 91 | 40-129 | 1 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 68-128 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 98 | 101 | 69-120 | 3 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 110 | 105 | 72-130 | 5 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 104 | 101 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 92 | 93 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 115 | 103 | 80-124 | 11 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 105 | 104 | 76-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 102 | 71-123 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 117 | 119 | 78-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 64-120 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | 99 | 68-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 103 | 100 | 63-135 | 3 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | 104 | 80-120 | 3 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | 93 | 58-133 | 3 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 105 | 110 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 79-120 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 113 | 116 | 40-127 | 2 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 97 | 93 | 59-120 | 4 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 0 | 30 |
| Batch number: Y141551AA | Sample number(s): 7482077,7482079 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 89 | 88 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 76 | 76 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 94 | 94 | 62-120 | 0 | 30 |
| t-Amyl methyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 75-120 | 2 | 30 |
| Benzene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 78-120 | 2 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 95 | 97 | 80-120 | 3 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 95 | 96 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 73-120 | 1 | 30 |
| Bromoform | 4 | U | 4. | 0.5 | ug/l | 89 | 87 | 61-120 | 2 | 30 |
| Bromomethane | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 54-133 | 2 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 96 | 95 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 88 | 90 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 73-120 | 2 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 89 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 | U | 1. | 0.5 | ug/l | 101 | 104 | 74-130 | 2 | 30 |
| Chlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 80-120 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478173
Reported: 06/09/14 at 12:41 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 1 | U | 1. | 0.5 | ug/l | 90 | 93 | 56-120 | 3 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 101 | 103 | 54-126 | 2 | 30 |
| Chloroform | 1 | U | 1. | 0.5 | ug/l | 98 | 100 | 80-122 | 3 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 96 | 99 | 80-120 | 3 | 30 |
| Chloromethane | 1 | U | 1. | 0.5 | ug/l | 103 | 106 | 63-120 | 3 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 90 | 93 | 80-120 | 3 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 89 | 93 | 80-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 71 | 69 | 47-120 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 85 | 85 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 | U | 1. | 0.5 | ug/l | 95 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 | U | 1. | 0.5 | ug/l | 97 | 97 | 76-120 | 0 | 30 |
| Dibromomethane | 1 | U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 48-132 | 3 | 30 |
| 1,1-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 94 | 80-120 | 3 | 30 |
| 1,2-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 65-135 | 1 | 30 |
| 1,1-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 109 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |
| trans-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 113 | 80-120 | 4 | 30 |
| 1,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 87 | 91 | 80-120 | 4 | 30 |
| 1,3-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 90 | 90 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 99 | 99 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 98 | 102 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 91 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 91 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 97 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 104 | 101 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 89 | 92 | 51-125 | 3 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 84 | 86 | 44-126 | 2 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 89 | 92 | 65-120 | 3 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 89 | 92 | 80-120 | 3 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 108 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 104 | 105 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 51-124 | 3 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 106 | 107 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 90 | 92 | 80-120 | 3 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 86 | 87 | 70-120 | 2 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 91 | 91 | 58-126 | 0 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 66-126 | 3 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 92 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 102 | 102 | 65-130 | 0 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 91 | 94 | 76-120 | 3 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 3 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 73 | 56-135 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478173
Reported: 06/09/14 at 12:41 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 63-120 | 1 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 80-120 | 2 | 30 |
| Batch number: 14156162401A | Sample number(s): 7482076,7482078 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14156162401A | Sample number(s): 7482076,7482078 | | | | | BKG: P482504 | | | |
| 14a Moisture Content by 160.3 | | | | | | 1.2 | 1.4 | 17 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141562AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7482076 | 102 | 104 | 99 | 95 |
| 7482078 | 102 | 97 | 99 | 92 |
| Blank | 102 | 104 | 100 | 95 |
| LCS | 102 | 104 | 104 | 100 |
| LCSD | 101 | 100 | 103 | 101 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141551AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7482077 | 101 | 99 | 97 | 95 |
| 7482079 | 103 | 100 | 96 | 95 |
| Blank | 101 | 100 | 96 | 95 |
| LCS | 101 | 98 | 98 | 99 |
| LCSD | 100 | 101 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/29/2014
CarrierName: FedEx
AirbillNo: 770138544895

A-13013
G-1478173
S-7482076-79

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140529-02
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-557-SA5C-SB-3.0-3.5 | 5/29/14 10:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-557-SA5C-SB-3.0-3.5 | 5/29/14 10:00 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| TB2-052914 | 5/29/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-559-SA5C-SB-2.5-3.0 | 5/29/14 10:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-559-SA5C-SB-2.5-3.0 | 5/29/14 10:35 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Randy Peden

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 52914 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/30/14 | 0945 |

SOIL VAPOR

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/29/2014
CarrierName: FedEx
AirbillNo: 770138544895

A-13013
G-1478173
S-7482076-79

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140529-01
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | 1,4 Dioxane 8260 SIM | VOCs 8260 | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB2-052914 | 5/29/14 09:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5/29/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/30/14 | 0945 |

EB2 - SV

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15973

Group Number(s): 1478173

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/30/2014 9:45 |
| Number of Packages: | 6 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | No | | |
| Sample Date/Times match COC: | No | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:26 on 05/30/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 1.6 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 3 | DT131 | 1.0 | DT | Wet | Y | Bagged | N | N |
| 4 | DT131 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 5 | DT131 | 1.6 | DT | Wet | Y | Bagged | N | N |
| 6 | DT131 | 1.1 | DT | Wet | Y | Bagged | N | N |

## Sample ID Discrepancy Details

| Sample ID on COC | Sample ID on Label | Comments |
|---|---|---|
| STS-PHY-SO-08_SM_CC-0.0 -1.0 | STS-PHY-SO-08_SM_CC-0.0 -1.0-MS | |



2425 New Holland Pike
Lancaster, PA 17605-2425



T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15973

Group Number(s): 1478173

Client: CDM Smith

## Sample Date/Time Discrepancy Details

| Sample ID on COC | Date/Time on Label | Comments |
|---|---|---|
| STS-PHY-PT-23_YS_A-BG | 5/29/2014 10:45 | |



2425 New Holland Pike
Lancaster, PA 17605-2425



T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 25, 2014

Project: SSFL Phase 3 Sampling

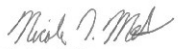
Submittal Date: 05/30/2014
Group Number: 1478251
SDG: PH207
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-503-SA5C-TR-0.5 Soil | 7482392 |
| SL-503-SA5C-TR-5.0 Soil | 7482393 |
| SL-503-SA5C-TR-7.5 Soil | 7482394 |
| TB3-052914 Water | 7482395 |
| SL-605-SA5C-TR-0.5 Soil | 7482396 |
| SL-605-SA5C-TR-5.0 Soil | 7482397 |
| SL-605-SA5C-TR-10.0 Soil | 7482398 |
| EB1-052914 Water | 7482399 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-503-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482392**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:05 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50305 SDG#: PH207-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 0.62 | J | 1.8 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 0.92 | J | 1.8 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.4 | J | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.94 | J | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.0 | | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.79 | J | 1.8 | 0.71 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Chrysene | 218-01-9 | 4.0 | | 1.8 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 7.5 | | 1.8 | 0.71 | | 1 |
| 12969 | Fluorene | 86-73-7 | 0.84 | J | 1.8 | 0.71 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.6 | J | 1.8 | 0.71 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 4.7 | | 1.8 | 0.71 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 6.7 | | 1.8 | 0.71 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 7.5 | | 1.8 | 0.71 | | 1 |
| 12969 | Pyrene | 129-00-0 | 4.3 | | 1.8 | 0.71 | | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | | 1 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 7.1 | J | 18 | 4.6 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-503-SA5C-TR-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7482392**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:05 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50305 SDG#: PH207-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.3 | J | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 20 | | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 35 | | 11 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 27,000 | | 42.5 | 7.65 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.25 | U | 4.25 | 0.786 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.42 | | 4.25 | 0.743 | | 1 |
| 06946 | Barium | 7440-39-3 | 136 | | 1.06 | 0.0350 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.11 | | 1.06 | 0.0711 | | 1 |
| 07914 | Boron | 7440-42-8 | 4.11 | J | 10.6 | 0.892 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0807 | | 1 |
| 01650 | Calcium | 7440-70-2 | 3,880 | | 21.2 | 3.55 | | 1 |
| 06951 | Chromium | 7440-47-3 | 30.2 | | 3.18 | 0.170 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 8.54 | | 1.06 | 0.105 | | 1 |
| 06953 | Copper | 7440-50-8 | 12.7 | | 2.12 | 0.308 | | 1 |
| 01654 | Iron | 7439-89-6 | 27,900 | | 42.5 | 3.84 | | 1 |
| 06955 | Lead | 7439-92-1 | 11.4 | | 3.18 | 0.531 | | 1 |
| 01656 | Lithium | 7439-93-2 | 25.7 | | 4.2 | 0.36 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,990 | | 10.6 | 1.77 | | 1 |
| 06958 | Manganese | 7439-96-5 | 428 | | 1.06 | 0.0881 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.201 | J | 2.12 | 0.180 | | 1 |
| 06961 | Nickel | 7440-02-0 | 17.0 | | 2.12 | 0.138 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 224 | | 10.6 | 3.07 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,370 | | 106 | 8.85 | | 1 |
| 01667 | Sodium | 7440-23-5 | 103 | J | 106 | 17.7 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.94 | J | 10.6 | 0.234 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,010 | | 1.06 | 0.180 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 56.1 | | 1.06 | 0.138 | | 1 |
| 06972 | Zinc | 7440-66-6 | 53.4 | | 4.25 | 0.212 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.44 | | 5.31 | 0.892 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.226 | J | 0.425 | 0.106 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0728 | J | 0.212 | 0.0276 | | 2 |
| 06144 | Strontium | 7440-24-6 | 37.8 | | 0.425 | 0.0722 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.327 | | 0.212 | 0.0318 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0183 | | 0.0172 | 0.0103 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482392**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:05 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50305 SDG#: PH207-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.9 C. | n.a. | 6.32 | 0.0100 | 0.0100 | | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.8 | 0.10 | 0.10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482392**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:05 by RR

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50305 SDG#: PH207-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.189 | JQ | 1.02 | 0.0784 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 1.48 | JB | 5.12 | 0.0854 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 2.07 | JB | 5.12 | 0.0688 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 4.94 | JB | 5.12 | 0.0703 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 4.88 | JB | 5.12 | 0.0661 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 119 | B | 5.12 | 0.147 | | 1 |
| 11031 | OCDD | 3268-87-9 | 2,540 | B | 10.2 | 0.169 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.129 | JBQ | 1.02 | 0.0790 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.379 | JQ | 5.12 | 0.0307 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.288 | JB | 5.12 | 0.0309 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.481 | JB | 5.12 | 0.0569 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.332 | JBQ | 5.12 | 0.0506 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.474 | JB | 5.12 | 0.0582 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.387 | JB | 5.12 | 0.0527 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 7.57 | B | 5.12 | 0.0294 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.442 | JBQ | 5.12 | 0.0513 | | 1 |
| 11031 | OCDF | 39001-02-0 | 24.6 | B | 10.2 | 0.0631 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 4.92 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 86 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 83 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 64 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 97 | 24 - 185 |
| 13C12-23478-PeCDF | 91 | 21 - 178 |
| 13C12-123478-HxCDF | 77 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 60 | 26 - 138 |
| 13C12-OCDF | 49 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482392**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:05 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50305 SDG#: PH207-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482392**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:05 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50305 SDG#: PH207-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 13:13 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 17:27 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/09/2014 23:02 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 03:54 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 20:26 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14157002 | 06/09/2014 18:34 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14157002 | 06/06/2014 11:25 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482392**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:05 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50305 SDG#: PH207-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:14 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:51 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:51 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:51 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:51 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:33 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14150039401A | 05/30/2014 20:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162402A | 06/05/2014 19:14 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-503-SA5C-TR-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7482393**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:20 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50350 SDG#: PH207-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.9 | U | 1.9 | 0.37 | | 1 |
| 12969 | Anthracene | 120-12-7 | 0.90 | J | 1.9 | 0.37 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.93 | J | 1.9 | 0.74 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Chrysene | 218-01-9 | 0.76 | J | 1.9 | 0.37 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.4 | | 1.9 | 0.74 | | 1 |
| 12969 | Fluorene | 86-73-7 | 0.90 | J | 1.9 | 0.74 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.9 | U | 1.9 | 0.74 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.4 | J | 1.9 | 0.74 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 4.6 | | 1.9 | 0.74 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.7 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 5.0 | | 1.9 | 0.74 | | 1 |
| 12969 | Pyrene | 129-00-0 | 2.5 | | 1.9 | 0.74 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | | 24.9 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.6 | U | 5.6 | 2.3 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 19 | U | 19 | 3.6 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 19 | U | 19 | 5.6 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 19 | U | 19 | 4.5 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 19 | U | 19 | 4.5 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 19 | U | 19 | 3.6 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 19 | U | 19 | 4.8 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 19 | U | 19 | 4.3 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482393**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:20 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50350 SDG#: PH207-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 19 | U | 19 | 3.6 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 19 | U | 19 | 3.6 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.5 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.5 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.6 | U | 5.6 | 2.2 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 24,800 | | 42.5 | 7.66 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.25 | U | 4.25 | 0.787 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.90 | | 4.25 | 0.744 | | 1 |
| 06946 | Barium | 7440-39-3 | 133 | | 1.06 | 0.0351 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.976 | J | 1.06 | 0.0712 | | 1 |
| 07914 | Boron | 7440-42-8 | 3.55 | J | 10.6 | 0.893 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.06 | U | 1.06 | 0.0808 | | 1 |
| 01650 | Calcium | 7440-70-2 | 4,420 | | 21.3 | 3.55 | | 1 |
| 06951 | Chromium | 7440-47-3 | 28.2 | | 3.19 | 0.170 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 9.42 | | 1.06 | 0.105 | | 1 |
| 06953 | Copper | 7440-50-8 | 9.76 | | 2.13 | 0.308 | | 1 |
| 01654 | Iron | 7439-89-6 | 27,600 | | 42.5 | 3.85 | | 1 |
| 06955 | Lead | 7439-92-1 | 7.55 | | 3.19 | 0.531 | | 1 |
| 01656 | Lithium | 7439-93-2 | 29.6 | | 4.3 | 0.36 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,720 | | 10.6 | 1.78 | | 1 |
| 06958 | Manganese | 7439-96-5 | 338 | | 1.06 | 0.0882 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.13 | U | 2.13 | 0.181 | | 1 |
| 06961 | Nickel | 7440-02-0 | 17.3 | | 2.13 | 0.138 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 200 | | 10.6 | 3.07 | | 1 |
| 01662 | Potassium | 7440-09-7 | 1,950 | | 106 | 8.86 | | 1 |
| 01667 | Sodium | 7440-23-5 | 552 | | 106 | 17.8 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.80 | J | 10.6 | 0.234 | | 1 |
| 06970 | Titanium | 7440-32-6 | 981 | | 1.06 | 0.181 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 55.0 | | 1.06 | 0.138 | | 1 |
| 06972 | Zinc | 7440-66-6 | 48.6 | | 4.25 | 0.213 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.57 | | 5.31 | 0.893 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482393**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:20 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50350 SDG#: PH207-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.425 U | 0.425 | 0.106 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0707 J | 0.213 | 0.0276 | | 2 |
| 06144 | Strontium | 7440-24-6 | 37.2 | 0.425 | 0.0723 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.213 | 0.213 | 0.0319 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0186 | 0.0180 | 0.0108 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.15 | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.8 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.4 | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482393**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:20 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50350 SDG#: PH207-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.11 | U | 1.11 | 0.0714 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.53 | U | 5.53 | 0.0385 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.53 | U | 5.53 | 0.0262 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0373 | JBQ | 5.53 | 0.0278 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.123 | JB | 5.53 | 0.0260 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.814 | JB | 5.53 | 0.0365 | | 1 |
| 11031 | OCDD | 3268-87-9 | 15.7 | B | 11.1 | 0.0301 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.11 | U | 1.11 | 0.0479 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0542 | J | 5.53 | 0.0190 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0328 | JBQ | 5.53 | 0.0188 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0565 | JB | 5.53 | 0.0245 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.53 | U | 5.53 | 0.0209 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.105 | JBQ | 5.53 | 0.0277 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0401 | JBQ | 5.53 | 0.0219 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.119 | JBQ | 5.53 | 0.0119 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0861 | JBQ | 5.53 | 0.0214 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.436 | JBQ | 11.1 | 0.0480 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0324 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 64 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 82 | 32 - 141 |
| 13C12-123678-HxCDD | 84 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 63 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 87 | 24 - 185 |
| 13C12-23478-PeCDF | 83 | 21 - 178 |
| 13C12-123478-HxCDF | 74 | 26 - 152 |
| 13C12-123678-HxCDF | 85 | 26 - 123 |
| 13C12-234678-HxCDF | 80 | 28 - 136 |
| 13C12-123789-HxCDF | 72 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 59 | 26 - 138 |
| 13C12-OCDF | 48 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482393**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:20 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50350 SDG#: PH207-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482393**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:20 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50350 SDG#: PH207-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/04/2014 13:46 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 04:29 | Laura M Krieger | 24.9 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415034662 | 05/30/2014 15:11 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415034662 | 05/30/2014 15:11 | Mitchell R Washel | n.a. |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 17:39 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/09/2014 23:21 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 01:44 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 20:47 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14157002 | 06/09/2014 19:30 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14157002 | 06/06/2014 11:25 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |

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**Sample Description: SL-503-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482393**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:20 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50350 SDG#: PH207-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:18 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:54 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:54 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:54 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:54 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:35 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14150039401A | 05/30/2014 20:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162402A | 06/05/2014 19:14 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482394**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50375 SDG#: PH207-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.36 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.36 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.71 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | | 27 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482394**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50375 SDG#: PH207-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.3 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,000 | | 40.7 | 7.33 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.07 | U | 4.07 | 0.752 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 8.02 | | 4.07 | 0.711 | | 1 |
| 06946 | Barium | 7440-39-3 | 66.9 | | 1.02 | 0.0335 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.541 | J | 1.02 | 0.0681 | | 1 |
| 07914 | Boron | 7440-42-8 | 0.959 | J | 10.2 | 0.854 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.02 | U | 1.02 | 0.0772 | | 1 |
| 01650 | Calcium | 7440-70-2 | 7,750 | | 20.3 | 3.39 | | 1 |
| 06951 | Chromium | 7440-47-3 | 28.4 | | 3.05 | 0.163 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.04 | | 1.02 | 0.101 | | 1 |
| 06953 | Copper | 7440-50-8 | 10.6 | | 2.03 | 0.295 | | 1 |
| 01654 | Iron | 7439-89-6 | 21,700 | | 40.7 | 3.68 | | 1 |
| 06955 | Lead | 7439-92-1 | 3.51 | | 3.05 | 0.508 | | 1 |
| 01656 | Lithium | 7439-93-2 | 25.0 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,070 | | 10.2 | 1.70 | | 1 |
| 06958 | Manganese | 7439-96-5 | 268 | | 1.02 | 0.0844 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.03 | U | 2.03 | 0.173 | | 1 |
| 06961 | Nickel | 7440-02-0 | 19.1 | | 2.03 | 0.132 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 629 | | 10.2 | 2.94 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,300 | | 102 | 8.48 | | 1 |
| 01667 | Sodium | 7440-23-5 | 514 | | 102 | 17.0 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.64 | J | 10.2 | 0.224 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,180 | | 1.02 | 0.173 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 44.9 | | 1.02 | 0.132 | | 1 |
| 06972 | Zinc | 7440-66-6 | 54.7 | | 4.07 | 0.203 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.88 | J | 5.08 | 0.854 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482394**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50375 SDG#: PH207-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.407 U | 0.407 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0271 J | 0.203 | 0.0264 | | 2 |
| 06144 | Strontium | 7440-24-6 | 30.1 | 0.407 | 0.0691 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.271 | 0.203 | 0.0305 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0109 J | 0.0174 | 0.0105 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.88 | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.3 | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482394**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50375 SDG#: PH207-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 U | 1.04 | 0.0569 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0683 JBQ | 5.20 | 0.0323 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.20 U | 5.20 | 0.0245 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0681 JBQ | 5.20 | 0.0256 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0308 JBQ | 5.20 | 0.0232 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.745 JB | 5.20 | 0.0332 | | 1 |
| 11031 | OCDD | 3268-87-9 | 9.95 JB | 10.4 | 0.0273 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 U | 1.04 | 0.0374 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0412 JQ | 5.20 | 0.0149 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.20 U | 5.20 | 0.0149 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0338 JBQ | 5.20 | 0.0199 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0431 JBQ | 5.20 | 0.0188 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0614 JB | 5.20 | 0.0220 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0355 JBQ | 5.20 | 0.0181 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0841 JBQ | 5.20 | 0.00908 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0665 JBQ | 5.20 | 0.0151 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.342 JBQ | 10.4 | 0.0406 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0166 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 69 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 80 | 32 - 141 |
| 13C12-123678-HxCDD | 82 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 74 | 24 - 169 |
| 13C12-12378-PeCDF | 94 | 24 - 185 |
| 13C12-23478-PeCDF | 89 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 79 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 61 | 26 - 138 |
| 13C12-OCDF | 50 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482394**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50375 SDG#: PH207-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482394**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:00 by RR

Submitted: 05/30/2014 09:45
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50375 SDG#: PH207-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/05/2014 07:26 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 05:06 | Laura M Krieger | 27 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415034662 | 05/30/2014 15:12 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415034662 | 05/30/2014 15:12 | Mitchell R Washel | n.a. |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 17:52 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 00:53 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 02:06 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 21:09 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14157002 | 06/09/2014 20:27 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14157002 | 06/06/2014 11:25 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-503-SA5C-TR-7.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482394**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 09:00 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

50375 SDG#: PH207-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:22 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:56 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:56 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:56 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:56 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:37 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14150039401A | 05/30/2014 20:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162402A | 06/05/2014 19:14 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

**Sample Description: TB3-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482395**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 08:00

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB329 SDG#: PH207-04TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14150B94A | 06/03/2014 13:42 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14150B94A | 06/03/2014 13:42 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482396**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:15 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60505 SDG#: PH207-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 0.58 | J | 1.8 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.92 | J | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.5 | J | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.4 | | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.1 | | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 0.80 | J | 1.8 | 0.71 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.4 | J | 1.8 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | J | 1.8 | 0.71 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.3 | J | 1.8 | 0.71 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.0 | J | 1.8 | 0.71 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.6 | J | 1.8 | 0.71 | | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 31 | | 18 | 4.1 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482396**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:15 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60505 SDG#: PH207-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.3 | J | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 10 | | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 16 | | 11 | 4.3 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.9 | J | 5.3 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 5.1 | J | 11 | 4.3 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 24,900 | | 41.4 | 7.45 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.14 | U | 4.14 | 0.765 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.61 | | 4.14 | 0.724 | | 1 |
| 06946 | Barium | 7440-39-3 | 131 | | 1.03 | 0.0341 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 1.05 | | 1.03 | 0.0693 | | 1 |
| 07914 | Boron | 7440-42-8 | 10.3 | U | 10.3 | 0.869 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0786 | | 1 |
| 01650 | Calcium | 7440-70-2 | 3,980 | | 20.7 | 3.45 | | 1 |
| 06951 | Chromium | 7440-47-3 | 24.8 | | 3.10 | 0.165 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 12.4 | | 1.03 | 0.102 | | 1 |
| 06953 | Copper | 7440-50-8 | 8.74 | | 2.07 | 0.300 | | 1 |
| 01654 | Iron | 7439-89-6 | 27,800 | | 41.4 | 3.74 | | 1 |
| 06955 | Lead | 7439-92-1 | 8.90 | | 3.10 | 0.517 | | 1 |
| 01656 | Lithium | 7439-93-2 | 22.8 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,360 | | 10.3 | 1.73 | | 1 |
| 06958 | Manganese | 7439-96-5 | 472 | | 1.03 | 0.0858 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.197 | J | 2.07 | 0.176 | | 1 |
| 06961 | Nickel | 7440-02-0 | 13.2 | | 2.07 | 0.134 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 148 | | 10.3 | 2.99 | | 1 |
| 01662 | Potassium | 7440-09-7 | 1,870 | | 103 | 8.62 | | 1 |
| 01667 | Sodium | 7440-23-5 | 114 | | 103 | 17.3 | | 1 |
| 06969 | Tin | 7440-31-5 | 3.12 | J | 10.3 | 0.227 | | 1 |
| 06970 | Titanium | 7440-32-6 | 915 | | 1.03 | 0.176 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 50.3 | | 1.03 | 0.134 | | 1 |
| 06972 | Zinc | 7440-66-6 | 46.6 | | 4.14 | 0.207 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.09 | J | 5.17 | 0.869 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.164 | J | 0.414 | 0.103 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0583 | J | 0.207 | 0.0269 | | 2 |
| 06144 | Strontium | 7440-24-6 | 36.0 | | 0.414 | 0.0703 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.295 | | 0.207 | 0.0310 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0183 | | 0.0168 | 0.0101 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482396**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:15 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60505 SDG#: PH207-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.93 | 0.0100 | 0.0100 | | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 6.1 | 0.10 | 0.10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-605-SA5C-TR-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7482396**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:15 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60505 SDG#: PH207-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.06 | U | 1.06 | 0.0543 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.31 | U | 5.31 | 0.0435 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0661 | JB | 5.31 | 0.0391 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.256 | JB | 5.31 | 0.0409 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.219 | JB | 5.31 | 0.0381 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 10.2 | B | 5.31 | 0.0569 | | 1 |
| 11031 | OCDD | 3268-87-9 | 140 | B | 10.6 | 0.0388 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.06 | U | 1.06 | 0.0461 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 2.63 | J | 5.31 | 0.0273 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0996 | JBQ | 5.31 | 0.0257 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.311 | JB | 5.31 | 0.0404 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.540 | JB | 5.31 | 0.0376 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.199 | JBQ | 5.31 | 0.0429 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0965 | JB | 5.31 | 0.0385 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.66 | JB | 5.31 | 0.0168 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.165 | JBQ | 5.31 | 0.0247 | | 1 |
| 11031 | OCDF | 39001-02-0 | 4.40 | JB | 10.6 | 0.0395 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.390 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 77 | 25 - 164 |
| 13C12-12378-PeCDD | 91 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 66 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 100 | 24 - 185 |
| 13C12-23478-PeCDF | 98 | 21 - 178 |
| 13C12-123478-HxCDF | 83 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 88 | 28 - 136 |
| 13C12-123789-HxCDF | 84 | 29 - 147 |
| 13C12-1234678-HpCDF | 93 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482396**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:15 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60505 SDG#: PH207-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482396**
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**Project Name: SSFL Phase 3 Sampling**

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3201 Jermantown Road
Suite 400
Fairfax VA 22030

60505 SDG#: PH207-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/05/2014 07:59 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 18:05 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 01:11 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 04:16 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 21:30 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14157002 | 06/09/2014 21:24 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14157002 | 06/06/2014 11:25 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |

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**Sample Description: SL-605-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482396**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:15 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60505 SDG#: PH207-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:26 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:58 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:58 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:58 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:58 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:39 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14150039401A | 05/30/2014 20:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162402A | 06/05/2014 19:14 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-605-SA5C-TR-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7482397**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60550 SDG#: PH207-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.36 | | 1 |
| 12969 | Anthracene | 120-12-7 | 0.59 | J | 1.8 | 0.36 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 0.72 | J | 1.8 | 0.72 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.6 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.1 | J | 1.8 | 0.72 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.5 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.5 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.8 | 0.36 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.5 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.5 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.5 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.1 | J | 1.8 | 0.72 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.74 | J | 1.8 | 0.72 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.0 | J | 1.8 | 0.72 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.72 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.5 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.2 | J | 1.8 | 0.72 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.0 | J | 1.8 | 0.72 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | | 24.56 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.4 | U | 5.4 | 2.3 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482397**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60550 SDG#: PH207-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.4 | U | 5.4 | 2.2 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 8.5 | | 5.4 | 2.2 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 11 | 4.3 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.5 | J | 5.4 | 2.2 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 5.0 | J | 11 | 4.3 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 20,900 | | 41.9 | 7.56 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.19 | U | 4.19 | 0.776 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.62 | | 4.19 | 0.734 | | 1 |
| 06946 | Barium | 7440-39-3 | 101 | | 1.05 | 0.0346 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.935 | J | 1.05 | 0.0702 | | 1 |
| 07914 | Boron | 7440-42-8 | 3.87 | J | 10.5 | 0.881 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.05 | U | 1.05 | 0.0797 | | 1 |
| 01650 | Calcium | 7440-70-2 | 4,760 | | 21.0 | 3.50 | | 1 |
| 06951 | Chromium | 7440-47-3 | 23.5 | | 3.15 | 0.168 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.78 | | 1.05 | 0.104 | | 1 |
| 06953 | Copper | 7440-50-8 | 18.7 | | 2.10 | 0.304 | | 1 |
| 01654 | Iron | 7439-89-6 | 25,900 | | 41.9 | 3.80 | | 1 |
| 06955 | Lead | 7439-92-1 | 9.38 | | 3.15 | 0.524 | | 1 |
| 01656 | Lithium | 7439-93-2 | 21.3 | | 4.2 | 0.36 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,790 | | 10.5 | 1.75 | | 1 |
| 06958 | Manganese | 7439-96-5 | 268 | | 1.05 | 0.0870 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.10 | U | 2.10 | 0.178 | | 1 |
| 06961 | Nickel | 7440-02-0 | 13.0 | | 2.10 | 0.136 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 260 | | 10.5 | 3.03 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,580 | | 105 | 8.74 | | 1 |
| 01667 | Sodium | 7440-23-5 | 257 | | 105 | 17.5 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.81 | J | 10.5 | 0.231 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.05 | 0.178 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 47.4 | | 1.05 | 0.136 | | 1 |
| 06972 | Zinc | 7440-66-6 | 57.0 | | 4.19 | 0.210 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.89 | J | 5.24 | 0.881 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482397**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60550 SDG#: PH207-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.156 J | 0.419 | 0.105 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0312 J | 0.210 | 0.0273 | | 2 |
| 06144 | Strontium | 7440-24-6 | 28.9 | 0.419 | 0.0713 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.275 | 0.210 | 0.0315 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0210 | 0.0171 | 0.0102 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.29 | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.4 | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482397**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60550 SDG#: PH207-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0572 JQ | 1.07 | 0.0553 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0515 JBQ | 5.37 | 0.0347 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.37 U | 5.37 | 0.0336 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.171 JBQ | 5.37 | 0.0332 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.289 JB | 5.37 | 0.0317 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 6.56 B | 5.37 | 0.0431 | | 1 |
| 11031 | OCDD | 3268-87-9 | 52.2 B | 10.7 | 0.0300 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0668 JBQ | 1.07 | 0.0534 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.265 J | 5.37 | 0.0231 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0966 JBQ | 5.37 | 0.0230 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.111 JBQ | 5.37 | 0.0299 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.120 JB | 5.37 | 0.0275 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.192 JBQ | 5.37 | 0.0321 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0844 JBQ | 5.37 | 0.0278 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.769 JB | 5.37 | 0.0166 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0963 JB | 5.37 | 0.0279 | | 1 |
| 11031 | OCDF | 39001-02-0 | 2.40 JB | 10.7 | 0.0438 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.140 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 72 | 25 - 164 |
| 13C12-12378-PeCDD | 91 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 90 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 79 | 24 - 169 |
| 13C12-12378-PeCDF | 99 | 24 - 185 |
| 13C12-23478-PeCDF | 97 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 53 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482397**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60550 SDG#: PH207-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482397**
**LL Group # 1478251**
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3201 Jermantown Road
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Fairfax VA 22030

60550 SDG#: PH207-06

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/05/2014 08:31 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 05:44 | Laura M Krieger | 24.56 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415034662 | 05/30/2014 15:14 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415034662 | 05/30/2014 15:14 | Mitchell R Washel | n.a. |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 18:18 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 01:30 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 04:37 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 21:52 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14157002 | 06/09/2014 22:20 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14157002 | 06/06/2014 11:25 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |

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**Sample Description: SL-605-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482397**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:30 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60550 SDG#: PH207-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:38 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 07:05 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:05 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:05 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:05 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:41 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14150039401A | 05/30/2014 20:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162402A | 06/05/2014 19:14 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482398**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:45 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60510 SDG#: PH207-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.3 | J | 1.8 | 0.37 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.0 | J | 1.8 | 0.73 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 19 | U | 19 | 3.7 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 20 | U | 20 | 6.6 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 20 | U | 20 | 6.6 | | 1 |
| 12969 | Chrysene | 218-01-9 | 0.87 | J | 1.8 | 0.37 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 20 | U | 20 | 6.6 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 20 | U | 20 | 6.6 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | U | 20 | 6.6 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 4.1 | | 1.8 | 0.73 | | 1 |
| 12969 | Fluorene | 86-73-7 | 0.79 | J | 1.8 | 0.73 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.80 | J | 1.8 | 0.73 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.73 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 20 | U | 20 | 6.6 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 4.4 | | 1.8 | 0.73 | | 1 |
| 12969 | Pyrene | 129-00-0 | 2.8 | | 1.8 | 0.73 | | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(e)pyrene

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | | 23.99 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.5 | U | 5.5 | 2.3 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 36 | U | 36 | 11 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 36 | U | 36 | 11 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 36 | U | 36 | 11 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.6 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.5 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.6 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.8 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.2 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482398**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:45 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60510 SDG#: PH207-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.6 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.6 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.5 | U | 5.5 | 2.2 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.5 | J | 5.5 | 2.2 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 8.4 | J | 11 | 4.4 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.4 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 24,200 | | 43.9 | 7.91 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.39 | U | 4.39 | 0.812 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.02 | J | 4.39 | 0.768 | | 1 |
| 06946 | Barium | 7440-39-3 | 96.8 | | 1.10 | 0.0362 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.913 | J | 1.10 | 0.0735 | | 1 |
| 07914 | Boron | 7440-42-8 | 1.48 | J | 11.0 | 0.922 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.10 | U | 1.10 | 0.0834 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,430 | | 22.0 | 3.67 | | 1 |
| 06951 | Chromium | 7440-47-3 | 17.5 | | 3.29 | 0.176 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.06 | | 1.10 | 0.109 | | 1 |
| 06953 | Copper | 7440-50-8 | 7.16 | | 2.20 | 0.318 | | 1 |
| 01654 | Iron | 7439-89-6 | 19,500 | | 43.9 | 3.97 | | 1 |
| 06955 | Lead | 7439-92-1 | 5.06 | | 3.29 | 0.549 | | 1 |
| 01656 | Lithium | 7439-93-2 | 23.1 | | 4.4 | 0.37 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,380 | | 11.0 | 1.83 | | 1 |
| 06958 | Manganese | 7439-96-5 | 278 | | 1.10 | 0.0911 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.392 | J | 2.20 | 0.187 | | 1 |
| 06961 | Nickel | 7440-02-0 | 10.8 | | 2.20 | 0.143 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 348 | | 11.0 | 3.17 | | 1 |
| 01662 | Potassium | 7440-09-7 | 1,980 | | 110 | 9.15 | | 1 |
| 01667 | Sodium | 7440-23-5 | 129 | | 110 | 18.3 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.96 | J | 11.0 | 0.241 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,120 | | 1.10 | 0.187 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.4 | | 1.10 | 0.143 | | 1 |
| 06972 | Zinc | 7440-66-6 | 44.6 | | 4.39 | 0.220 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.48 | J | 5.49 | 0.922 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482398**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:45 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60510 SDG#: PH207-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.439 U | 0.439 | 0.110 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0374 J | 0.220 | 0.0285 | | 2 |
| 06144 | Strontium | 7440-24-6 | 19.4 | 0.439 | 0.0746 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.224 | 0.220 | 0.0329 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0643 | 0.0183 | 0.0110 | | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.68 | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.2 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.9 | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482398**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:45 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60510 SDG#: PH207-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.09 U | 1.09 | 0.0283 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0292 JBQ | 5.45 | 0.0193 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0182 JB | 5.45 | 0.0155 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0534 JBQ | 5.45 | 0.0164 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0368 JBQ | 5.45 | 0.0157 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.465 JB | 5.45 | 0.0254 | | 1 |
| 11031 | OCDD | 3268-87-9 | 5.73 JB | 10.9 | 0.0198 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0243 JBQ | 1.09 | 0.0209 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.125 JQ | 5.45 | 0.0101 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0263 JB | 5.45 | 0.0100 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0259 JB | 5.45 | 0.0139 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0419 JB | 5.45 | 0.0124 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0596 JBQ | 5.45 | 0.0153 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0442 JBQ | 5.45 | 0.0125 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.109 JB | 5.45 | 0.00704 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0264 JBQ | 5.45 | 0.0131 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.294 JB | 10.9 | 0.0208 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0240 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 67 | 25 - 164 |
| 13C12-12378-PeCDD | 81 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 90 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 85 | 23 - 140 |
| 13C12-OCDD | 74 | 17 - 157 |
| 13C12-2378-TCDF | 63 | 24 - 169 |
| 13C12-12378-PeCDF | 84 | 24 - 185 |
| 13C12-23478-PeCDF | 78 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 84 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 108 | 28 - 143 |
| 13C12-1234789-HpCDF | 68 | 26 - 138 |
| 13C12-OCDF | 60 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482398**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:45 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60510 SDG#: PH207-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482398**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:45 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60510 SDG#: PH207-07

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14151SLE026 | 06/05/2014 09:03 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14151SLE026 | 06/02/2014 03:30 | Sherry L Morrow | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 06:22 | Laura M Krieger | 23.99 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415034662 | 05/30/2014 15:15 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415034662 | 05/30/2014 15:15 | Mitchell R Washel | n.a. |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 18:30 | Richard A Shober | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 01:48 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540006A | 06/05/2014 04:59 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540007A | 06/05/2014 22:14 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540007A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540006A | 06/03/2014 16:35 | JoElla L Rice | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14157002 | 06/09/2014 16:22 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14157002 | 06/06/2014 11:25 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:14 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-605-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7482398**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 13:45 by RR

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60510 SDG#: PH207-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:42 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 07:08 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:08 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:08 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:08 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:43 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14150039401A | 05/30/2014 20:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162402A | 06/05/2014 19:14 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | | 3 | 2 | | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270D** | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | Acenaphthene | 83-32-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Acenaphthylene | 208-96-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Aniline | 62-53-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Anthracene | 120-12-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzidine | 92-87-5 | 61 | U | 61 | 20 | | 1 |
| 10461 | Benzo(a)anthracene | 56-55-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(a)pyrene | 50-32-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(b)fluoranthene | 205-99-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(g,h,i)perylene | 191-24-2 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzo(k)fluoranthene | 207-08-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Benzoic acid | 65-85-0 | 15 | U | 15 | 6 | | 1 |
| 10461 | Benzyl alcohol | 100-51-6 | 15 | U | 15 | 10 | | 1 |
| 10461 | 1,1'-Biphenyl | 92-52-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Bromophenyl-phenylether | 101-55-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Butylbenzylphthalate | 85-68-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Di-n-butylphthalate | 84-74-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | Carbazole | 86-74-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chloro-3-methylphenol | 59-50-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chloroaniline | 106-47-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethoxy)methane | 111-91-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Chloroethyl)ether | 111-44-4 | 1 | U | 1 | 0.5 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 1 | U | 1 | 0.5 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Chloronaphthalene | 91-58-7 | 1 | U | 1 | 0.4 | | 1 |
| 10461 | 2-Chlorophenol | 95-57-8 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Chlorophenyl-phenylether | 7005-72-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Chrysene | 218-01-9 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenz(a,h)anthracene | 53-70-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Dibenzofuran | 132-64-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,2-Dichlorobenzene | 95-50-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,3-Dichlorobenzene | 541-73-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1,4-Dichlorobenzene | 106-46-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,3'-Dichlorobenzidine | 91-94-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dichlorophenol | 120-83-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,6-Dichlorophenol | 87-65-0 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Diethylphthalate | 84-66-2 | 5 | U | 5 | 2 | | 1 |
| 10461 | 2,4-Dimethylphenol | 105-67-9 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3,5-Dimethylphenol | 108-68-9 | 10 | U | 10 | 3 | | 1 |
| 10461 | Dimethylphthalate | 131-11-3 | 5 | U | 5 | 2 | | 1 |
| 10461 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 15 | U | 15 | 5 | | 1 |
| 10461 | 2,4-Dinitrophenol | 51-28-5 | 30 | U | 30 | 10 | | 1 |
| 10461 | 1,2-Diphenylhydrazine | 122-66-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | bis(2-Ethylhexyl)phthalate | 117-81-7 | 5 | U | 5 | 2 | | 1 |
| 10461 | Fluoranthene | 206-44-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Fluorene | 86-73-7 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobenzene | 118-74-1 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Hexachlorobutadiene | 87-68-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Hexachlorocyclopentadiene | 77-47-4 | 15 | U | 15 | 5 | | 1 |
| 10461 | Hexachloroethane | 67-72-1 | 5 | U | 5 | 1 | | 1 |
| 10461 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Isophorone | 78-59-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 1-Methylnaphthalene | 90-12-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylnaphthalene | 91-57-6 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | 2-Methylphenol | 95-48-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Methylphenol | 106-44-5 | 1 | U | 1 | 0.5 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10461 | Naphthalene | 91-20-3 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | NDPA as diphenylamine | n.a. | 5 | U | 5 | 2 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Nitroaniline | 88-74-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 3-Nitroaniline | 99-09-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Nitroaniline | 100-01-6 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Nitrobenzene | 98-95-3 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2-Nitrophenol | 88-75-5 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 4-Nitrophenol | 100-02-7 | 30 | U | 30 | 10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | N-Nitrosodimethylamine | 62-75-9 | 5 | U | 5 | 2 | | 1 |
| 10461 | N-Nitroso-di-n-propylamine | 621-64-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | N-Nitrosodiphenylamine | 86-30-6 | 1 | U | 1 | 0.5 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | Di-n-octylphthalate | 117-84-0 | 5 | U | 5 | 2 | | 1 |
| 10461 | Pentachlorophenol | 87-86-5 | 5 | U | 5 | 1 | | 1 |
| 10461 | Phenanthrene | 85-01-8 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Phenol | 108-95-2 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | Pyrene | 129-00-0 | 0.5 | U | 0.5 | 0.1 | | 1 |
| 10461 | Pyridine | 110-86-1 | 5 | U | 5 | 2 | | 1 |
| 10461 | 1,2,4-Trichlorobenzene | 120-82-1 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,5-Trichlorophenol | 95-95-4 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2,4,6-Trichlorophenol | 88-06-2 | 1 | U | 1 | 0.5 | | 1 |
| **GC/MS Semivolatiles SW-846 8270D SIM** | | | ug/l | | ug/l | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Anthracene | 120-12-7 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.0 | U | 1.0 | 0.051 | | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.13 | J | 1.0 | 0.051 | | 1 |
| 12971 | Chrysene | 218-01-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.057 | J | 1.0 | 0.051 | | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.0 | U | 1.0 | 0.051 | | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.12 | J | 1.0 | 0.051 | | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Fluorene | 86-73-7 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.023 | J | 0.051 | 0.010 | | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.033 | J | 0.051 | 0.010 | | 1 |
| 12971 | Morpholine | 110-91-8 | 20 | U | 20 | 20 | | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.087 | | 0.051 | 0.030 | | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.051 | U | 0.051 | 0.010 | | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.0 | U | 1.0 | 0.051 | | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.051 | U | 0.051 | 0.030 | | 1 |
| 12971 | Pyrene | 129-00-0 | 0.051 | U | 0.051 | 0.010 | | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial trial. Similar results were obtained in both trials.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. Since the result is </= 1/2 the LOQ, the data is reported. | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |
| **Explosives** | **SW-846 8330A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10131 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 0.60 | U | 0.60 | 0.30 | 10000000 | 1 |
| 10131 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 1,3-Dinitrobenzene | 99-65-0 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Dinitrotoluene | 121-14-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Dinitrotoluene | 606-20-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | HMX | 2691-41-0 | 2.0 | U | 2.0 | 0.65 | 10000000 | 1 |
| 10131 | Nitrobenzene | 98-95-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Nitroglycerin | 55-63-0 | 15 | U | 15 | 5.2 | 10000000 | 1 |
| 10131 | 2-Nitrotoluene | 88-72-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 3-Nitrotoluene | 99-08-1 | 1.2 | U | 1.2 | 0.40 | 10000000 | 1 |
| 10131 | 4-Nitrotoluene | 99-99-0 | 1.2 | U | 1.2 | 0.60 | 10000000 | 1 |
| 10131 | PETN | 78-11-5 | 18 | U | 18 | 6.0 | 10000000 | 1 |
| 10131 | RDX | 121-82-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Tetryl | 479-45-8 | 0.60 | U | 0.60 | 0.40 | 10000000 | 1 |
| 10131 | 1,3,5-Trinitrobenzene | 99-35-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4,6-Trinitrotoluene | 118-96-7 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10407 | 2,4-D | 94-75-7 | 0.48 | U | 0.48 | 0.15 | | 1 |
| 10407 | Dalapon | 75-99-0 | 1.2 | U | 1.2 | 0.24 | | 1 |
| 10407 | 2,4-DB | 94-82-6 | 0.96 | U | 0.96 | 0.29 | | 1 |
| 10407 | Dicamba | 1918-00-9 | 0.29 | U | 0.29 | 0.077 | | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.48 | U | 0.48 | 0.12 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.48 | U | 0.48 | 0.15 | | 1 |
| 10407 | MCPA | 94-74-6 | 190 | U | 190 | 48 | | 1 |
| 10407 | MCPP | 93-65-2 | 190 | U | 190 | 48 | | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.048 | U | 0.048 | 0.014 | | 1 |
| 10407 | 2,4,5-TP | 93-72-1 | 0.048 | U | 0.048 | 0.0096 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0083 | U | 0.0083 | 0.0017 | | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0083 | U | 0.0083 | 0.0025 | | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0083 | U | 0.0083 | 0.0028 | | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0083 | U | 0.0083 | 0.0017 | | 1 |
| 10589 | Chlordane | 57-74-9 | 0.42 | U | 0.42 | 0.13 | | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.017 | U | 0.017 | 0.0042 | | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.017 | U | 0.017 | 0.0042 | | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.017 | U | 0.017 | 0.0043 | | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0083 | U | 0.0083 | 0.0028 | | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.017 | U | 0.017 | 0.0044 | | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0083 | U | 0.0083 | 0.0036 | | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.017 | U | 0.017 | 0.013 | | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.017 | U | 0.017 | 0.0048 | | 1 |
| 10589 | Endrin | 72-20-8 | 0.017 | U | 0.017 | 0.0068 | | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.083 | U | 0.083 | 0.017 | | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.017 | U | 0.017 | 0.0042 | | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0083 | U | 0.0083 | 0.0017 | | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0083 | U | 0.0083 | 0.0019 | | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.083 | U | 0.083 | 0.025 | | 1 |
| 10589 | Mirex | 2385-85-5 | 0.042 | U | 0.042 | 0.0083 | | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.83 | U | 0.83 | 0.25 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.092 | | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.13 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 12926 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Propylene glycol | 57-55-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 8.0 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10319 | m-Terphenyl | 92-06-8 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| 10319 | o-Terphenyl | 84-15-1 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| 10319 | p-Terphenyl | 92-94-4 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.48 | U | 0.48 | 0.095 | | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.48 | U | 0.48 | 0.095 | | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.095 | U | 0.095 | 0.048 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 | U | 0.0100 | 0.00033 | | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0084 | | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00076 | | 1 |
| 01750 | Calcium | 7440-70-2 | 0.108 | J | 0.400 | 0.0334 | | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0016 | | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.0013 | | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0027 | | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0430 | | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0047 | | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0047 | | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.0252 | J | 0.200 | 0.0167 | | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0100 | U | 0.0100 | 0.00083 | | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0054 | J | 0.0200 | 0.0017 | | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 | U | 0.0200 | 0.0015 | | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 | U | 0.200 | 0.0418 | | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 | U | 1.00 | 0.0980 | | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 | U | 2.00 | 0.167 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.100 U | 0.100 | 0.0084 | | 1 |
| | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | | 1 |
| 06044 | Strontium | 7440-24-6 | 0.00042 J | 0.0020 | 0.00034 | | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **ug/l** | **ug/l** | **ug/l** | **ug/l** | |
| 06467 | 2b Chromium VI by EPA 7199 | 18540-29-9 | 10.0 U | 10.0 | 5.0 | | 1 |
| | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 5.7 | 0.010 | 0.010 | | 1 |

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**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.92 | U | 1.92 | 0.431 | | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 9.60 | U | 9.60 | 0.295 | | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.293 | JQ | 9.60 | 0.179 | | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.60 | U | 9.60 | 0.177 | | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.60 | U | 9.60 | 0.180 | | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.642 | JBQ | 9.60 | 0.222 | | 1 |
| 10915 | OCDD | 3268-87-9 | 3.20 | JBQ | 19.2 | 0.231 | | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.92 | U | 1.92 | 0.283 | | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.298 | JBQ | 9.60 | 0.164 | | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.216 | JQ | 9.60 | 0.150 | | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.151 | JB | 9.60 | 0.137 | | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.303 | JB | 9.60 | 0.134 | | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.547 | JBQ | 9.60 | 0.145 | | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.224 | JB | 9.60 | 0.131 | | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.396 | JB | 9.60 | 0.0914 | | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 9.60 | U | 9.60 | 0.125 | | 1 |
| 10915 | OCDF | 39001-02-0 | 0.317 | JBQ | 19.2 | 0.293 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0717 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 79 | 28 - 130 |
| 13C12-123789-HxCDD | 76 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 70 | 24 - 185 |
| 13C12-23478-PeCDF | 71 | 21 - 178 |
| 13C12-123478-HxCDF | 76 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 78 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

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**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141551AA | 06/04/2014 12:49 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141551AA | 06/04/2014 12:49 | Sarah A Guill | 1 |
| 10461 | 8b SVOCs by EPA 8270D | SW-846 8270D | 1 | 14155WAG026 | 06/10/2014 15:47 | Joseph M Gambler | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14155WAH026 | 06/11/2014 14:49 | Chad A Moline | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14155WAH026 | 06/05/2014 10:00 | William H Saadeh | 1 |
| 11010 | 8270D BNA Extraction | SW-846 3510C | 1 | 14155WAG026 | 06/05/2014 10:00 | William H Saadeh | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14150B94A | 06/03/2014 14:08 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14150B94A | 06/03/2014 14:08 | Laura M Krieger | 1 |
| 10131 | 18b Energetics by 8330A | SW-846 8330A | 1 | 141550011A | 06/06/2014 13:51 | James H Place | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 141510002A | 06/02/2014 18:33 | Melissa McDermott | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141540023A | 06/04/2014 14:21 | Richard A Shober | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530009A | 06/05/2014 06:23 | Jamie L Brillhart | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141530008A | 06/03/2014 13:26 | Jessica L Miller | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141530008A | 06/02/2014 16:30 | Seth A Farrier | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 141530009A | 06/02/2014 16:30 | Seth A Farrier | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 141510002A | 06/01/2014 14:30 | David V Hershey Jr | 1 |
| 11122 | Energetics Extraction | SW-846 8330 | 1 | 141550011A | 06/05/2014 12:15 | Edwin Ortiz | 1 |
| 12926 | 20b Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141550025A | 06/04/2014 18:59 | Tyler O Griffin | 1 |
| 10319 | 23b Terphenyls by 8015B | SW-846 8015B | 1 | 141540005A | 06/04/2014 16:25 | Glorines Suarez-Rivera | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141550009A | 06/05/2014 18:38 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141550010A | 06/05/2014 20:04 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141550010A | 06/04/2014 22:00 | Elaine F Stoltzfus | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141550009A | 06/04/2014 22:00 | Elaine F Stoltzfus | 1 |
| 10304 | Terphenyls water prep | SW-846 3510C | 1 | 141540005A | 06/03/2014 06:15 | Kelli M Barto | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14156001 | 06/06/2014 17:28 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14156001 | 06/05/2014 10:10 | Brett M Weidman | 1 |

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**Sample Description: EB1-052914 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7482399**
**LL Group # 1478251**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/29/2014 15:00 by AP

Submitted: 05/30/2014 09:45
Reported: 06/25/2014 16:54

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB129 SDG#: PH207-08EB*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01743 | Aluminum | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141550635001 | 06/05/2014 18:22 | Katlin N Cataldi | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141550639001B | 06/05/2014 17:56 | John P Hook | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141550639001A | 06/05/2014 17:56 | John P Hook | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141550639001A | 06/05/2014 17:56 | John P Hook | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141550639001A | 06/05/2014 17:56 | John P Hook | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141545713001 | 06/05/2014 16:10 | Parker D Lindstrom | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141550635001 | 06/05/2014 09:49 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141550639001 | 06/05/2014 09:00 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141545713001 | 06/04/2014 01:30 | Annamaria Kuhns | 1 |
| 06467 | 2b Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14150987301A | 05/30/2014 13:19 | Clinton M Wilson | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14150121521A | 05/30/2014 19:50 | Luz M Groff | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: Y141551AA | Sample number(s): 7482399 | | | | | | | | |
| Acetone | 20 U | 20. | 6 | ug/l | 89 | 88 | 43-149 | 1 | 30 |
| Acrolein | 100 U | 100. | 40 | ug/l | 76 | 76 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/l | 94 | 94 | 62-120 | 0 | 30 |
| t-Amyl methyl ether | 1 U | 1. | 0.5 | ug/l | 91 | 93 | 75-120 | 2 | 30 |
| Benzene | 1 U | 1. | 0.5 | ug/l | 93 | 95 | 78-120 | 2 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/l | 95 | 97 | 80-120 | 3 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/l | 95 | 96 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 U | 1. | 0.5 | ug/l | 93 | 94 | 73-120 | 1 | 30 |
| Bromoform | 4 U | 4. | 0.5 | ug/l | 89 | 87 | 61-120 | 2 | 30 |
| Bromomethane | 1 U | 1. | 0.5 | ug/l | 97 | 98 | 58-120 | 1 | 30 |
| 2-Butanone | 10 U | 10. | 3 | ug/l | 86 | 88 | 54-133 | 2 | 30 |
| t-Butyl alcohol | 50 U | 50. | 5 | ug/l | 96 | 95 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/l | 88 | 90 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/l | 91 | 93 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/l | 91 | 93 | 73-120 | 2 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/l | 89 | 89 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 U | 1. | 0.5 | ug/l | 101 | 104 | 74-130 | 2 | 30 |
| Chlorobenzene | 1 U | 1. | 0.5 | ug/l | 95 | 96 | 80-120 | 2 | 30 |
| Chloroethane | 1 U | 1. | 0.5 | ug/l | 90 | 93 | 56-120 | 3 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/l | 101 | 103 | 54-126 | 2 | 30 |
| Chloroform | 1 U | 1. | 0.5 | ug/l | 98 | 100 | 80-122 | 3 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/l | 96 | 99 | 80-120 | 3 | 30 |
| Chloromethane | 1 U | 1. | 0.5 | ug/l | 103 | 106 | 63-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/l | 90 | 93 | 80-120 | 3 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/l | 89 | 93 | 80-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/l | 71 | 69 | 47-120 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/l | 85 | 85 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 U | 1. | 0.5 | ug/l | 95 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 U | 1. | 0.5 | ug/l | 97 | 97 | 76-120 | 0 | 30 |
| Dibromomethane | 1 U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 1 U | 1. | 0.5 | ug/l | 94 | 96 | 48-132 | 3 | 30 |
| 1,1-Dichloroethane | 1 U | 1. | 0.5 | ug/l | 92 | 94 | 80-120 | 3 | 30 |
| 1,2-Dichloroethane | 1 U | 1. | 0.5 | ug/l | 98 | 99 | 65-135 | 1 | 30 |
| 1,1-Dichloroethene | 1 U | 1. | 0.5 | ug/l | 108 | 109 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 1 U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |
| trans-1,2-Dichloroethene | 1 U | 1. | 0.5 | ug/l | 108 | 113 | 80-120 | 4 | 30 |
| 1,2-Dichloropropane | 1 U | 1. | 0.5 | ug/l | 87 | 91 | 80-120 | 4 | 30 |
| 1,3-Dichloropropane | 1 U | 1. | 0.5 | ug/l | 90 | 90 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 U | 1. | 0.5 | ug/l | 99 | 99 | 67-124 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 98 | 102 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 91 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 91 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 97 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 104 | 101 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 89 | 92 | 51-125 | 3 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 84 | 86 | 44-126 | 2 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 89 | 92 | 65-120 | 3 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 89 | 92 | 80-120 | 3 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 108 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 104 | 105 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 51-124 | 3 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 106 | 107 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 90 | 92 | 80-120 | 3 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 86 | 87 | 70-120 | 2 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 91 | 91 | 58-126 | 0 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 66-126 | 3 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 92 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 102 | 102 | 65-130 | 0 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 91 | 94 | 76-120 | 3 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 3 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 73 | 56-135 | 2 | 30 |
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 63-120 | 1 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 80-120 | 2 | 30 |

Batch number: 14151SLE026 Sample number(s): 7482392-7482394,7482396-7482398

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | 84-118 |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 98 | 78-120 |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 107 | 85-118 |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | 83-119 |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | 80-122 |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | 82-135 |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 79* | 81-110 |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | 79-121 |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 81 | 79-123 |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | 75-144 |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 104 | 75-148 |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | 84-113 |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | 83-123 |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | 73-147 |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 86 | 85-122 |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | 68-146 |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | 85-116 |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 88 | 84-120 |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | 82-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 91 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 96 | | 80-119 | | |
| Batch number: 14155WAG026 | Sample number(s): 7482399 | | | | | | | | | |
| Acenaphthene | 0.5 | U | 0.5 | 0.1 | ug/l | 99 | 98 | 80-112 | 1 | 30 |
| Acenaphthylene | 0.5 | U | 0.5 | 0.1 | ug/l | 105 | 104 | 84-125 | 1 | 30 |
| Aniline | 1 | U | 1. | 0.5 | ug/l | 90 | 84 | 43-94 | 7 | 30 |
| Anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 103 | 106 | 82-116 | 2 | 30 |
| Benzidine | 60 | U | 60. | 20 | ug/l | 67 | 65 | 20-94 | 3 | 30 |
| Benzo(a)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 112 | 111 | 81-126 | 1 | 30 |
| Benzo(a)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 106 | 82-116 | 1 | 30 |
| Benzo(b)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 106 | 106 | 82-121 | 0 | 30 |
| Benzo(g,h,i)perylene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 106 | 76-128 | 0 | 30 |
| Benzo(k)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 108 | 107 | 81-122 | 0 | 30 |
| Benzoic acid | 15 | U | 15. | 6 | ug/l | 98* | 44 | 10-97 | 76* | 30 |
| Benzyl alcohol | 15 | U | 15. | 10 | ug/l | 98 | 96 | 66-112 | 2 | 30 |
| 1,1'-Biphenyl | 1 | U | 1. | 0.5 | ug/l | 94 | 93 | 78-109 | 1 | 30 |
| 4-Bromophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 103 | 105 | 82-118 | 2 | 30 |
| Butylbenzylphthalate | 5 | U | 5. | 2 | ug/l | 107 | 107 | 79-119 | 0 | 30 |
| Di-n-butylphthalate | 5 | U | 5. | 2 | ug/l | 106 | 107 | 80-119 | 1 | 30 |
| Carbazole | 1 | U | 1. | 0.5 | ug/l | 104 | 107 | 84-117 | 3 | 30 |
| 4-Chloro-3-methylphenol | 1 | U | 1. | 0.5 | ug/l | 107 | 108 | 80-123 | 1 | 30 |
| 4-Chloroaniline | 1 | U | 1. | 0.5 | ug/l | 97 | 93 | 55-113 | 4 | 30 |
| bis(2-Chloroethoxy)methane | 1 | U | 1. | 0.5 | ug/l | 103 | 102 | 77-115 | 0 | 30 |
| bis(2-Chloroethyl)ether | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 78-112 | 1 | 30 |
| bis(2-Chloroisopropyl)ether | 1 | U | 1. | 0.5 | ug/l | 105 | 106 | 56-119 | 2 | 30 |
| 2-Chloronaphthalene | 1 | U | 1. | 0.4 | ug/l | 96 | 95 | 71-120 | 0 | 30 |
| 2-Chlorophenol | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 76-111 | 0 | 30 |
| 4-Chlorophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 102 | 100 | 77-114 | 1 | 30 |
| Chrysene | 0.5 | U | 0.5 | 0.1 | ug/l | 111 | 110 | 81-120 | 1 | 30 |
| Dibenz(a,h)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 111 | 111 | 83-124 | 0 | 30 |
| Dibenzofuran | 1 | U | 1. | 0.5 | ug/l | 99 | 98 | 81-110 | 1 | 30 |
| 1,2-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 91 | 88 | 69-107 | 4 | 30 |
| 1,3-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 86 | 83 | 69-107 | 4 | 30 |
| 1,4-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 88 | 85 | 66-111 | 4 | 30 |
| 3,3'-Dichlorobenzidine | 5 | U | 5. | 2 | ug/l | 78 | 74 | 47-108 | 5 | 30 |
| 2,4-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 103 | 104 | 84-119 | 1 | 30 |
| 2,6-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 107 | 102 | 80-116 | 5 | 30 |
| Diethylphthalate | 5 | U | 5. | 2 | ug/l | 99 | 98 | 70-118 | 2 | 30 |
| 2,4-Dimethylphenol | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 81-114 | 0 | 30 |
| 3,5-Dimethylphenol | 10 | U | 10. | 3 | ug/l | 110 | 108 | 70-130 | 1 | 30 |
| Dimethylphthalate | 5 | U | 5. | 2 | ug/l | 92 | 89 | 43-128 | 4 | 30 |
| 4,6-Dinitro-2-methylphenol | 15 | U | 15. | 5 | ug/l | 102 | 111 | 56-145 | 9 | 30 |
| 2,4-Dinitrophenol | 30 | U | 30. | 10 | ug/l | 88 | 94 | 32-148 | 7 | 30 |
| 1,2-Diphenylhydrazine | 1 | U | 1. | 0.5 | ug/l | 106 | 105 | 74-124 | 0 | 30 |
| bis(2-Ethylhexyl)phthalate | 5 | U | 5. | 2 | ug/l | 110 | 121 | 78-124 | 10 | 30 |
| Fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 107 | 108 | 82-121 | 2 | 30 |
| Fluorene | 0.5 | U | 0.5 | 0.1 | ug/l | 102 | 102 | 80-117 | 0 | 30 |
| Hexachlorobenzene | 0.5 | U | 0.5 | 0.1 | ug/l | 98 | 99 | 80-119 | 1 | 30 |
| Hexachlorobutadiene | 1 | U | 1. | 0.5 | ug/l | 78 | 68 | 61-120 | 13 | 30 |
| Hexachlorocyclopentadiene | 15 | U | 15. | 5 | ug/l | 70 | 68 | 28-133 | 3 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Hexachloroethane | 5 | U | 5. | 1 | ug/l | 78 | 70 | 55-109 | 11 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 108 | 107 | 80-126 | 0 | 30 |
| Isophorone | 1 | U | 1. | 0.5 | ug/l | 111 | 112 | 82-119 | 1 | 30 |
| 1-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 100 | 96 | 83-116 | 4 | 30 |
| 2-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 94 | 91 | 75-106 | 4 | 30 |
| 2-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 102 | 101 | 72-111 | 1 | 30 |
| 4-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 98 | 95 | 63-110 | 3 | 30 |
| Naphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 97 | 95 | 75-108 | 2 | 30 |
| NDPA as diphenylamine | 5 | U | 5. | 2 | ug/l | 100 | 102 | 70-130 | 2 | 30 |
| 2-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 98 | 100 | 84-122 | 2 | 30 |
| 3-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 104 | 105 | 70-118 | 0 | 30 |
| 4-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 86 | 86 | 66-110 | 0 | 30 |
| Nitrobenzene | 1 | U | 1. | 0.5 | ug/l | 104 | 104 | 77-119 | 0 | 30 |
| 2-Nitrophenol | 1 | U | 1. | 0.5 | ug/l | 109 | 111 | 81-128 | 2 | 30 |
| 4-Nitrophenol | 30 | U | 30. | 10 | ug/l | 67 | 68 | 25-95 | 2 | 30 |
| N-Nitroso-di-n-propylamine | 1 | U | 1. | 0.5 | ug/l | 104 | 106 | 71-117 | 2 | 30 |
| N-Nitrosodimethylamine | 5 | U | 5. | 2 | ug/l | 84 | 79 | 38-98 | 6 | 30 |
| N-Nitrosodiphenylamine | 1 | U | 1. | 0.5 | ug/l | 100 | 102 | 80-115 | 2 | 30 |
| Di-n-octylphthalate | 5 | U | 5. | 2 | ug/l | 119 | 117 | 78-129 | 1 | 30 |
| Pentachlorophenol | 5 | U | 5. | 1 | ug/l | 115 | 119 | 54-124 | 4 | 30 |
| Phenanthrene | 0.5 | U | 0.5 | 0.1 | ug/l | 99 | 101 | 81-114 | 2 | 30 |
| Phenol | 1 | U | 1. | 0.5 | ug/l | 63 | 60 | 31-79 | 6 | 30 |
| Pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 98 | 97 | 81-112 | 0 | 30 |
| Pyridine | 5 | U | 5. | 2 | ug/l | 83 | 74 | 22-96 | 12 | 30 |
| 1,2,4-Trichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 92 | 86 | 77-111 | 6 | 30 |
| 2,4,5-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 106 | 107 | 81-121 | 1 | 30 |
| 2,4,6-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 107 | 109 | 84-119 | 2 | 30 |
| Batch number: 14155WAH026 | Sample number(s): 7482399 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 108 | 95 | 83-119 | 12 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 90 | 81-130 | 13 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 93 | 83-125 | 12 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 97 | 79-122 | 7 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 103 | 93 | 80-121 | 11 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 100 | 79-136 | 9 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 95 | 67-118 | 8 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 94 | 72-132 | 10 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 109 | 96 | 81-131 | 13 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 86 | 77 | 40-138 | 11 | 30 |
| Di-n-butylphthalate | 0.073 | J | 1.0 | 0.050 | ug/l | 106 | 98 | 64-141 | 7 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 96 | 84-118 | 11 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 101 | 90 | 66-133 | 12 | 30 |
| Diethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 101 | 91 | 64-137 | 11 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 85 | 72 | 23-139 | 16 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.38 | J | 1.0 | 0.050 | ug/l | 87 | 182* | 70-143 | 71* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 96 | 84-124 | 11 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 107 | 94 | 82-119 | 12 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 89 | 68-132 | 11 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 87 | 86-130 | 10 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 91 | 83 | 81-131 | 9 | 30 |
| Morpholine | 20 | U | 20. | 20 | ug/l | | | | | |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 94 | 86 | 82-122 | 9 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 75 | 67 | 56-96 | 12 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 80 | 70 | 57-145 | 14 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 104 | 93 | 83-116 | 11 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 93 | 78-125 | 9 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14150B94A | Sample number(s): 7482395,7482399 | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 U | 50. | 20 | ug/l | 97 | 92 | 80-133 | 6 | 30 |
| Batch number: 14154A16A | Sample number(s): 7482393-7482394,7482397-7482398 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 141550011A | Sample number(s): 7482399 | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 0.60 U | 0.60 | 0.30 | ug/l | 100 | 103 | 80-148 | 3 | 30 |
| 2-Amino-4,6-Dinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 90 | 92 | 77-115 | 2 | 30 |
| 2,6-Diamino-4-nitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 90 | 88 | 73-121 | 2 | 30 |
| 2,4-Diamino-6-nitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 88 | 87 | 72-119 | 2 | 30 |
| 1,3-Dinitrobenzene | 0.60 U | 0.60 | 0.20 | ug/l | 97 | 97 | 85-117 | 1 | 30 |
| 2,4-Dinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 97 | 101 | 83-115 | 4 | 30 |
| 2,6-Dinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 94 | 98 | 77-145 | 4 | 30 |
| HMX | 2.0 U | 2.0 | 0.65 | ug/l | 106 | 108 | 67-115 | 2 | 30 |
| Nitrobenzene | 0.60 U | 0.60 | 0.20 | ug/l | 93 | 96 | 80-115 | 3 | 30 |
| Nitroglycerin | 15 U | 15. | 5.2 | ug/l | 91 | 93 | 81-115 | 2 | 30 |
| 2-Nitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 94 | 100 | 74-115 | 6 | 30 |
| 3-Nitrotoluene | 1.2 U | 1.2 | 0.40 | ug/l | 101 | 108 | 83-118 | 7 | 30 |
| 4-Nitrotoluene | 1.2 U | 1.2 | 0.60 | ug/l | 94 | 102 | 76-120 | 8 | 30 |
| PETN | 18 U | 18. | 6.0 | ug/l | 98 | 105 | 81-115 | 7 | 30 |
| RDX | 0.60 U | 0.60 | 0.20 | ug/l | 94 | 91 | 76-120 | 4 | 30 |
| Tetryl | 0.60 U | 0.60 | 0.40 | ug/l | 81 | 84 | 47-150 | 3 | 30 |
| 1,3,5-Trinitrobenzene | 0.60 U | 0.60 | 0.20 | ug/l | 156* | 153* | 83-115 | 2 | 30 |
| 2,4,6-Trinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 93 | 96 | 84-117 | 3 | 30 |
| Batch number: 141510002A | Sample number(s): 7482399 | | | | | | | | |
| 2,4-D | 0.50 U | 0.50 | 0.16 | ug/l | 147 | 149 | 68-155 | 1 | 30 |
| Dalapon | 1.3 U | 1.3 | 0.25 | ug/l | 60 | 57 | 27-127 | 6 | 30 |
| 2,4-DB | 1.0 U | 1.0 | 0.30 | ug/l | 131 | 134 | 60-172 | 2 | 30 |
| Dicamba | 0.30 U | 0.30 | 0.080 | ug/l | 178* | 120 | 65-142 | 39* | 30 |
| Dinoseb | 0.50 U | 0.50 | 0.12 | ug/l | 71 | 66 | 16-163 | 7 | 30 |
| 2,4-DP (Dichlorprop) | 0.50 U | 0.50 | 0.16 | ug/l | 176 | 173 | 91-181 | 2 | 30 |
| MCPA | 200 U | 200. | 50 | ug/l | 136* | 137* | 65-128 | 1 | 30 |
| MCPP | 200 U | 200. | 50 | ug/l | 136 | 132 | 61-145 | 3 | 30 |
| 2,4,5-T | 0.050 U | 0.050 | 0.015 | ug/l | 148 | 146 | 67-163 | 1 | 30 |
| 2,4,5-TP | 0.050 U | 0.050 | 0.010 | ug/l | 140 | 138 | 71-162 | 1 | 30 |
| Batch number: 141540023A | Sample number(s): 7482399 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 U | 1.0 | 0.20 | ug/l | 109 | | 85-115 | | |
| Batch number: 141550002A | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 5.0 U | 5.0 | 2.1 | ug/kg | 102 | | 85-115 | | |
| Batch number: 141530008A | Sample number(s): 7482399 | | | | | | | | |
| Aroclor 5432 | 0.40 U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 U | 0.40 | 0.080 | ug/l | 69 | 59 | 34-115 | 15 | 30 |
| Aroclor 5460 | 0.40 U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 U | 0.40 | 0.080 | ug/l | 85 | 93 | 60-117 | 9 | 30 |
| PCB-1221 | 0.40 U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 U | 0.40 | 0.080 | ug/l | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 83 | 103 | 67-128 | 21 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141530009A | Sample number(s): 7482399 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 87 | 80 | 37-137 | 8 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 101 | 95 | 44-148 | 6 | 30 |
| Beta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 94 | 90 | 48-147 | 4 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 99 | 96 | 44-146 | 4 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.0046 | J | 0.016 | 0.0040 | ug/l | 96 | 88 | 44-152 | 9 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 98 | 86 | 44-146 | 12 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 98 | 92 | 44-146 | 6 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 103 | 99 | 47-146 | 5 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 98 | 93 | 45-146 | 5 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 86 | 84 | 39-140 | 2 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 94 | 91 | 45-139 | 4 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 96 | 93 | 48-139 | 3 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 89 | 79 | 43-139 | 12 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 89 | 89 | 43-144 | 0 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 95 | 95 | 42-152 | 0 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 88 | 82 | 36-146 | 8 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 97 | 93 | 49-142 | 4 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 99 | 91 | 40-150 | 8 | 30 |
| Mirex | 0.040 | U | 0.040 | 0.0080 | ug/l | | | | | |
| Toxaphene | 0.80 | U | 0.80 | 0.24 | ug/l | | | | | |
| Batch number: 141540027A | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 96 | 97 | 36-106 | 1 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 116 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 125 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141550025A | Sample number(s): 7482399 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 8.0 | mg/l | 109 | | 46-143 | | |
| Ethylene glycol | 10 | U | 10. | 8.0 | mg/l | 116 | | 63-128 | | |
| Propylene glycol | 10 | U | 10. | 8.0 | mg/l | 124 | | 62-136 | | |
| Triethylene glycol | 10 | U | 10. | 8.0 | mg/l | 96 | | 31-136 | | |
| Batch number: 141540005A | Sample number(s): 7482399 | | | | | | | | | |
| m-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 86 | 97 | 61-108 | 12 | 20 |
| o-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 85 | 95 | 75-125 | 11 | 20 |
| p-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 80 | 89 | 63-110 | 11 | 20 |
| Batch number: 141540006A | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 89 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 91 | | 78-127 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 87 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 80 | | 60-115 | | |
| Batch number: 141540007A | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 66* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 54 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 54* | | 60-115 | | |
| Batch number: 141550009A | Sample number(s): 7482399 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 84 | 87 | 67-109 | 4 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 89 | 93 | 71-119 | 4 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 88 | 92 | 75-117 | 5 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 55 | 62 | 44-134 | 13 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 64 | 68 | 55-86 | 5 | 30 |
| Batch number: 141550010A | Sample number(s): 7482399 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 72 | 76 | 67-109 | 5 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 77 | 81 | 71-119 | 5 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 77 | 81 | 75-117 | 5 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 48 | 62 | 44-134 | 25 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 50* | 52* | 55-86 | 5 | 30 |
| Batch number: 141540637001 | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 105 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 106 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 9.64 | J | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 105 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 107 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 105 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.45 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 108 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 104 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 106 | | 80-120 | | |
| Batch number: 141540637001A | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Silver | 0.200 U | 0.200 | 0.0260 | mg/kg | 111 | | 80-120 | | |
| Strontium | 0.400 U | 0.400 | 0.0680 | mg/kg | 113 | | 80-120 | | |
| Thallium | 0.200 U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141540637001B | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | |
| Selenium | 0.400 U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 141540638001 | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 99 | | 85-120 | | |
| Batch number: 141545713001 | Sample number(s): 7482399 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00006 0 | mg/l | 104 | 101 | 90-115 | 3 | 20 |
| Batch number: 141550635001 | Sample number(s): 7482399 | | | | | | | | |
| Aluminum | 0.400 U | 0.400 | 0.0828 | mg/l | 108 | 111 | 90-112 | 3 | 20 |
| Antimony | 0.0400 U | 0.0400 | 0.0053 | mg/l | 103 | 104 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 U | 0.0400 | 0.0068 | mg/l | 111 | 112 | 90-113 | 1 | 20 |
| Barium | 0.0100 U | 0.0100 | 0.00033 | mg/l | 104 | 105 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 U | 0.0100 | 0.00067 | mg/l | 103 | 104 | 90-111 | 1 | 20 |
| Boron | 0.100 U | 0.100 | 0.0084 | mg/l | 94 | 96 | 90-110 | 2 | 20 |
| Cadmium | 0.0100 U | 0.0100 | 0.00076 | mg/l | 106 | 106 | 90-112 | 0 | 20 |
| Calcium | 0.0347 J | 0.400 | 0.0334 | mg/l | 105 | 106 | 90-112 | 1 | 20 |
| Chromium | 0.0300 U | 0.0300 | 0.0016 | mg/l | 102 | 104 | 90-110 | 2 | 20 |
| Cobalt | 0.0100 U | 0.0100 | 0.0013 | mg/l | 107 | 107 | 90-110 | 1 | 20 |
| Copper | 0.0200 U | 0.0200 | 0.0027 | mg/l | 106 | 107 | 90-112 | 1 | 20 |
| Iron | 0.400 U | 0.400 | 0.0430 | mg/l | 106 | 107 | 90-112 | 1 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0047 | mg/l | 107 | 108 | 88-116 | 1 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0047 | mg/l | 105 | 106 | 90-110 | 1 | 20 |
| Magnesium | 0.0232 J | 0.200 | 0.0167 | mg/l | 102 | 104 | 89-110 | 2 | 20 |
| Manganese | 0.00085 J | 0.0100 | 0.00083 | mg/l | 104 | 106 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0017 | mg/l | 104 | 104 | 90-110 | 1 | 20 |
| Nickel | 0.0200 U | 0.0200 | 0.0015 | mg/l | 109 | 110 | 90-111 | 0 | 20 |
| Phosphorus | 0.200 U | 0.200 | 0.0418 | mg/l | 103 | 103 | 90-110 | 0 | 20 |
| Potassium | 1.00 U | 1.00 | 0.0980 | mg/l | 103 | 104 | 90-110 | 1 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 102 | 103 | 87-114 | 1 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0029 | mg/l | 100 | 100 | 90-110 | 0 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 104 | 105 | 90-113 | 1 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0020 | mg/l | 107 | 108 | 90-110 | 2 | 20 |
| Zinc | 0.0020 J | 0.0400 | 0.0020 | mg/l | 104 | 104 | 90-110 | 1 | 20 |
| Zirconium | 0.100 U | 0.100 | 0.0084 | mg/l | 106 | 107 | 90-110 | 1 | 20 |
| Batch number: 141550639001A | Sample number(s): 7482399 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 101 | 100 | 90-115 | 1 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 101 | 100 | 90-110 | 1 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 95 | 97 | 90-115 | 2 | 20 |
| Batch number: 141550639001B | Sample number(s): 7482399 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 104 | 103 | 90-114 | 1 | 20 |
| Batch number: 14150987301A | Sample number(s): 7482399 | | | | | | | | |
| 2b Chromium VI by EPA 7199 | 10.0 U | 10.0 | 5.0 | ug/l | 98 | 106 | 90-110 | 8 | 20 |
| Batch number: 14150039401A | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14150121521A | Sample number(s): 7482399 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 99 | | 90-110 | | |
| Batch number: 14156162402A | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14156001 | Sample number(s): 7482399 | | | | | | | | |
| 2378-TCDD | 0.350 J | 2.00 | 0.268 | pg/l | 95 | | 60-150 | | |
| 12378-PeCDD | 0.291 J | 10.0 | 0.193 | pg/l | 93 | | 60-150 | | |
| 123478-HxCDD | 10.0 U | 10.0 | 0.155 | pg/l | 94 | | 60-150 | | |
| 123678-HxCDD | 10.0 U | 10.0 | 0.156 | pg/l | 93 | | 60-150 | | |
| 123789-HxCDD | 0.359 J | 10.0 | 0.155 | pg/l | 94 | | 60-150 | | |
| 1234678-HpCDD | 0.511 J | 10.0 | 0.176 | pg/l | 93 | | 60-150 | | |
| OCDD | 3.21 J | 20.0 | 0.224 | pg/l | 90 | | 60-150 | | |
| 2378-TCDF | 2.00 U | 2.00 | 0.194 | pg/l | 89 | | 60-150 | | |
| 12378-PeCDF | 0.654 J | 10.0 | 0.127 | pg/l | 94 | | 60-150 | | |
| 23478-PeCDF | 10.0 U | 10.0 | 0.118 | pg/l | 95 | | 60-150 | | |
| 123478-HxCDF | 0.334 J | 10.0 | 0.112 | pg/l | 99 | | 60-150 | | |
| 123678-HxCDF | 0.154 J | 10.0 | 0.114 | pg/l | 97 | | 60-150 | | |
| 123789-HxCDF | 0.265 J | 10.0 | 0.107 | pg/l | 94 | | 60-150 | | |
| 234678-HxCDF | 0.272 J | 10.0 | 0.109 | pg/l | 95 | | 60-150 | | |
| 1234678-HpCDF | 0.570 J | 10.0 | 0.0768 | pg/l | 95 | | 60-150 | | |
| 1234789-HpCDF | 0.509 J | 10.0 | 0.0974 | pg/l | 94 | | 60-150 | | |
| OCDF | 1.26 J | 20.0 | 0.244 | pg/l | 94 | | 60-150 | | |
| Batch number: 14157002 | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.0602 | ng/kg | 105 | | 67-158 | | |
| 12378-PeCDD | 0.101 J | 5.00 | 0.0359 | ng/kg | 103 | | 70-142 | | |
| 123478-HxCDD | 0.0591 J | 5.00 | 0.0229 | ng/kg | 100 | | 70-164 | | |
| 123678-HxCDD | 0.0425 J | 5.00 | 0.0249 | ng/kg | 96 | | 76-134 | | |
| 123789-HxCDD | 0.0758 J | 5.00 | 0.0233 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.151 J | 5.00 | 0.0256 | ng/kg | 96 | | 70-140 | | |
| OCDD | 0.599 J | 10.0 | 0.0292 | ng/kg | 91 | | 78-144 | | |
| 2378-TCDF | 0.0476 J | 1.00 | 0.0405 | ng/kg | 110 | | 75-158 | | |
| 12378-PeCDF | 5.00 U | 5.00 | 0.0168 | ng/kg | 102 | | 80-134 | | |
| 23478-PeCDF | 0.0664 J | 5.00 | 0.0173 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.0920 J | 5.00 | 0.0235 | ng/kg | 96 | | 72-134 | | |
| 123678-HxCDF | 0.0449 J | 5.00 | 0.0203 | ng/kg | 97 | | 84-130 | | |
| 123789-HxCDF | 0.0932 J | 5.00 | 0.0241 | ng/kg | 98 | | 78-130 | | |
| 234678-HxCDF | 0.0780 J | 5.00 | 0.0213 | ng/kg | 97 | | 70-156 | | |
| 1234678-HpCDF | 0.0827 J | 5.00 | 0.00854 | ng/kg | 93 | | 82-122 | | |
| 1234789-HpCDF | 0.0955 J | 5.00 | 0.0156 | ng/kg | 95 | | 78-138 | | |
| OCDF | 0.338 J | 10.0 | 0.0440 | ng/kg | 92 | | 63-170 | | |
| Batch number: 14156001 | Sample number(s): 7482399 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.403 | | | pg/l | | | | | |
| Batch number: 14157002 | Sample number(s): 7482392-7482394,7482396-7482398 | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0140 | | | ng/kg | | | | | |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14151SLE026 | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P479354 | | | | | | | | |
| Acenaphthene | 97 | 96 | 48-127 | 0 | 30 | | | | |
| Acenaphthylene | 100 | 100 | 60-128 | 0 | 30 | | | | |
| Anthracene | 93 | 94 | 52-126 | 0 | 30 | | | | |
| Benzo(a)anthracene | 101 | 99 | 44-143 | 1 | 30 | | | | |
| Benzo(a)pyrene | 83 | 82 | 49-137 | 1 | 30 | | | | |
| Benzo(b)fluoranthene | 88 | 90 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 77 | 63-111 | 0 | 30 | | | | |
| Benzo(g,h,i)perylene | 77 | 74 | 33-141 | 4 | 30 | | | | |
| Benzo(k)fluoranthene | 84 | 86 | 49-144 | 2 | 30 | | | | |
| Butylbenzylphthalate | 105 | 104 | 64-156 | 1 | 30 | | | | |
| Di-n-butylphthalate | 106 | 103 | 52-147 | 3 | 30 | | | | |
| Chrysene | 91 | 94 | 43-141 | 2 | 30 | | | | |
| Dibenz(a,h)anthracene | 85 | 85 | 25-145 | 1 | 30 | | | | |
| Diethylphthalate | 89 | 91 | 66-140 | 2 | 30 | | | | |
| Dimethylphthalate | 85 | 84 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 119 | 112 | 48-164 | 6 | 30 | | | | |
| Fluoranthene | 94 | 117 | 38-153 | 20 | 30 | | | | |
| Fluorene | 81 | 80 | 57-130 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 81 | 79 | 26-139 | 2 | 30 | | | | |
| 1-Methylnaphthalene | 90 | 91 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 95 | 95 | 46-147 | 1 | 30 | | | | |
| Naphthalene | 89 | 89 | 52-136 | 0 | 30 | | | | |
| N-Nitrosodimethylamine | 84 | 84 | 39-134 | 0 | 30 | | | | |
| Di-n-octylphthalate | 106 | 105 | 52-162 | 1 | 30 | | | | |
| Phenanthrene | 104 | 125 | 50-137 | 17 | 30 | | | | |
| Pyrene | 86 | 97 | 26-143 | 12 | 30 | | | | |
| Batch number: 14154A16A | Sample number(s): 7482393-7482394,7482397-7482398 UNSPK: P483434 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 72 | 77 | 69-123 | 6 | 30 | | | | |
| Batch number: 141540023A | Sample number(s): 7482399 UNSPK: 7482399 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 107 | 107 | 80-120 | 1 | 20 | | | | |
| Batch number: 141550002A | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P483434 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 105 | 102 | 80-120 | 3 | 20 | | | | |
| Batch number: 141540027A | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P483434 | | | | | | | | |
| PCB-1016 | 115 | 110 | 41-135 | 4 | 50 | | | | |
| PCB-1260 | 121 | 113 | 40-134 | 7 | 50 | | | | |
| Batch number: 141550025A | Sample number(s): 7482399 UNSPK: 7482399 | | | | | | | | |
| Diethylene glycol | 91 | 117 | 50-166 | 25* | 20 | | | | |
| Ethylene glycol | 95 | 124 | 50-155 | 26* | 20 | | | | |
| Propylene glycol | 101 | 132 | 54-145 | 27* | 20 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Triethylene glycol | 86 | 103 | 50-133 | 19 | 20 | | | | |
| Batch number: 141540006A | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P479354 | | | | | | | | |
| EFH (C12-C14) | 88 | 89 | 49-123 | 1 | 20 | | | | |
| EFH (C15-C20) | 106 | 107 | 49-123 | 2 | 20 | | | | |
| EFH (C21-C30) | 77 | 81 | 49-123 | 2 | 20 | | | | |
| EFH (C30-C40) | 73 | 79 | 49-123 | 3 | 20 | | | | |
| EFH (C8-C11) | 85 | 83 | 49-123 | 2 | 20 | | | | |
| Batch number: 141540007A | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P479354 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 61 | 70 | 49-123 | 13 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 63 | 71 | 49-123 | 13 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 68 | 77 | 49-123 | 12 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 65 | 74 | 49-123 | 12 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 50 | 58 | 49-123 | 16 | 20 | | | | |
| Batch number: 141540637001 | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P483434 BKG: P483434 | | | | | | | | |
| Aluminum | 618 (2) | 1777 (2) | 75-125 | 20 | 20 | 9,070 | 8,860 | 2 | 20 |
| Antimony | 71* | 67* | 75-125 | 5 | 20 | 3.96 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 97 | 103 | 75-125 | 6 | 20 | 3.02 J | 6.16 | 68* (1) | 20 |
| Barium | 98 | 104 | 75-125 | 6 | 20 | 57.9 | 59.0 | 2 | 20 |
| Beryllium | 101 | 106 | 75-125 | 6 | 20 | 0.428 J | 0.442 J | 3 (1) | 20 |
| Boron | 95 | 96 | 75-125 | 4 | 20 | 1.67 J | 1.97 J | 16 (1) | 20 |
| Cadmium | 99 | 98 | 75-125 | 1 | 20 | 0.990 U | 0.971 U | 0 (1) | 20 |
| Calcium | 33 (2) | 209 (2) | 75-125 | 28* | 20 | 2,040 | 2,050 | 1 | 20 |
| Chromium | 92 | 109 | 75-125 | 13 | 20 | 8.95 | 9.36 | 5 (1) | 20 |
| Cobalt | 97 | 97 | 75-125 | 2 | 20 | 3.29 | 3.36 | 2 (1) | 20 |
| Copper | 100 | 115 | 75-125 | 14 | 20 | 4.22 | 4.58 | 8 (1) | 20 |
| Iron | -955 (2) | 2923 (2) | 75-125 | 23* | 20 | 15,500 | 16,300 | 6 | 20 |
| Lead | 92 | 106 | 75-125 | 12 | 20 | 4.72 | 5.01 | 6 (1) | 20 |
| Lithium | 103 | 106 | 75-125 | 4 | 20 | 21.4 | 22.7 | 6 | 20 |
| Magnesium | 44 (2) | 433 (2) | 75-125 | 21* | 20 | 3,190 | 3,350 | 5 | 20 |
| Manganese | 64 (2) | 106 (2) | 75-125 | 8 | 20 | 237 | 241 | 2 | 20 |
| Molybdenum | 97 | 97 | 75-125 | 2 | 20 | 0.294 J | 0.168 J | 55* (1) | 20 |
| Nickel | 98 | 99 | 75-125 | 3 | 20 | 5.52 | 5.42 | 2 (1) | 20 |
| Phosphorus | 75 | 166* | 75-125 | 21* | 20 | 318 | 338 | 6 | 20 |
| Potassium | 116 | 145* | 75-125 | 8 | 20 | 2,710 | 2,720 | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 3 | 20 | 68.0 J | 68.2 J | 0 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 1 | 20 | 2.50 J | 2.55 J | 2 (1) | 20 |
| Titanium | 219 (2) | 305 (2) | 75-125 | 8 | 20 | 838 | 884 | 5 | 20 |
| Vanadium | 100 | 113 | 75-125 | 10 | 20 | 19.9 | 21.1 | 6 | 20 |
| Zinc | 96 | 117 | 75-125 | 11 | 20 | 54.1 | 56.6 | 4 | 20 |
| Zirconium | 102 | 102 | 75-125 | 2 | 20 | 1.85 J | 2.67 J | 36* (1) | 20 |
| Batch number: 141540637001A | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P483434 BKG: P483434 | | | | | | | | |
| Silver | 101 | 102 | 75-125 | 2 | 20 | 0.198 U | 0.194 U | 0 (1) | 20 |
| Strontium | 97 | 107 | 75-125 | 5 | 20 | 9.02 | 9.92 | 10 | 20 |
| Thallium | 103 | 99 | 75-125 | 1 | 20 | 0.216 | 0.234 | 8 (1) | 20 |
| Batch number: 141540637001B | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P483434 BKG: P483434 | | | | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | 106 | 109 | 75-125 | 4 | 20 | 0.396 U | 0.133 J | 200* (1) | 20 |
| Batch number: 141540638001 | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P483434 BKG: P483434 | | | | | | | | |
| 3a Mercury 7471A | 110 | 111 | 65-135 | 2 | 20 | 0.0157 U | 0.0164 U | 0 (1) | 20 |
| Batch number: 14150039401A | Sample number(s): 7482392-7482394,7482396-7482398 BKG: 7482392 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.32 | 6.33 | 0 | 3 |
| Batch number: 14150121521A | Sample number(s): 7482399 BKG: P476617 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 6.5 | 6.5 | 0 | 3 |
| Batch number: 14156162402A | Sample number(s): 7482392-7482394,7482396-7482398 BKG: P482508 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 78.0 | 77.6 | 1 | 20 |
| Batch number: 14157002 | Sample number(s): 7482392-7482394,7482396-7482398 UNSPK: P482511 | | | | | | | | |
| 2378-TCDD | 101 | 102 | 40-135 | 0 | 20 | | | | |
| 12378-PeCDD | 101 | 101 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDD | 97 | 96 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDD | 95 | 95 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDD | 97 | 95 | 40-135 | 3 | 20 | | | | |
| 1234678-HpCDD | 94 | 91 | 40-135 | 3 | 20 | | | | |
| OCDD | 90 | 90 | 40-135 | 1 | 20 | | | | |
| 2378-TCDF | 104 | 104 | 40-135 | 2 | 20 | | | | |
| 12378-PeCDF | 97 | 96 | 40-135 | 2 | 20 | | | | |
| 23478-PeCDF | 97 | 96 | 40-135 | 2 | 20 | | | | |
| 123478-HxCDF | 93 | 94 | 40-135 | 0 | 20 | | | | |
| 123678-HxCDF | 95 | 94 | 40-135 | 1 | 20 | | | | |
| 123789-HxCDF | 96 | 92 | 40-135 | 5 | 20 | | | | |
| 234678-HxCDF | 95 | 94 | 40-135 | 2 | 20 | | | | |
| 1234678-HpCDF | 92 | 92 | 40-135 | 2 | 20 | | | | |
| 1234789-HpCDF | 93 | 93 | 40-135 | 1 | 20 | | | | |
| OCDF | 89 | 90 | 40-135 | 0 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141551AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7482399 | 102 | 101 | 95 | 94 |
| Blank | 101 | 100 | 96 | 95 |
| LCS | 101 | 98 | 98 | 99 |
| LCSD | 100 | 101 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Surrogate Quality Control

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14151SLE026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7482392 | 92 | 81 | 83 |
| 7482393 | 100 | 112 | 86 |
| 7482394 | 101 | 115 | 88 |
| 7482396 | 99 | 110 | 89 |
| 7482397 | 100 | 109 | 90 |
| 7482398 | 92 | 108 | 90 |
| Blank | 99 | 106 | 89 |
| LCS | 103 | 119* | 89 |
| MS | 96 | 106 | 88 |
| MSD | 99 | 107 | 87 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 8b SVOCs by EPA 8270D
Batch number: 14155WAG026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7482399 | 49 | 69 | 87 | 98 | 91 | 100 |
| Blank | 47 | 67 | 84 | 92 | 84 | 97 |
| LCS | 59 | 77 | 92 | 100 | 96 | 106 |
| LCSD | 56 | 75 | 93 | 101 | 94 | 94 |
| Limits: | 20-110 | 20-110 | 30-110 | 40-130 | 45-130 | 45-130 |

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14155WAH026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7482399 | 95 | 98 | 84 |
| Blank | 93 | 95 | 77 |
| LCS | 106 | 113 | 93 |
| LCSD | 96 | 102 | 85 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14150B94A

| | Trifluorotoluene-F |
|---|---|
| 7482395 | 81 |
| 7482399 | 83 |
| Blank | 81 |
| LCS | 91 |
| LCSD | 85 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14154A16A

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Surrogate Quality Control

| | Trifluorotoluene-F |
|---|---|
| 7482393 | 87 |
| 7482394 | 89 |
| 7482397 | 86 |
| 7482398 | 87 |
| Blank | 90 |
| LCS | 96 |
| MS | 83 |
| MSD | 87 |
| Limits: | 50-142 |

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 141510002A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7482399 | 79 |
| Blank | 96 |
| LCS | 123 |
| LCSD | 119 |
| Limits: | 50-150 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141530008A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7482399 | 92 | 67 |
| Blank | 76 | 53 |
| LCS | 98 | 59 |
| LCSD | 107 | 78 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 141530009A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7482399 | 110 | 88 |
| Blank | 106 | 82 |
| LCS | 98 | 87 |
| LCSD | 90 | 88 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141540027A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7482392 | 113 | 108 |
| 7482393 | 120 | 112 |
| 7482394 | 121* | 112 |
| 7482396 | 117 | 104 |
| 7482397 | 122* | 115 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7482398 | 111 | 115 |
| Blank | 116 | 110 |
| LCS | 122* | 116 |
| LCSD | 124* | 121* |
| MS | 121* | 116 |
| MSD | 116 | 110 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 18b Energetics by 8330A
Batch number: 141550011A

| | 2-Nitro-m-xylene |
|---|---|
| 7482399 | 115 |
| Blank | 111 |
| LCS | 89 |
| LCSD | 97 |
| Limits: | 80-146 |

Analysis Name: 23b Terphenyls by 8015B
Batch number: 141540005A

| | n-Triacontane-d62 |
|---|---|
| 7482399 | 89 |
| Blank | 90 |
| LCS | 95 |
| LCSD | 108 |
| Limits: | 36-160 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141540006A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7482392 | 95 | 96 |
| 7482393 | 86 | 82 |
| 7482394 | 73 | 87 |
| 7482396 | 69 | 80 |
| 7482397 | 68 | 80 |
| 7482398 | 86 | 86 |
| Blank | 74 | 88 |
| LCS | 76 | 91 |
| MS | 78 | 87 |
| MSD | 92 | 87 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141540007A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7482392 | 59 | 73 |
| 7482393 | 62 | 62* |
| 7482394 | 57 | 65* |
| 7482396 | 61 | 65* |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7482397 | 64 | 70 |
| 7482398 | 56 | 64* |
| Blank | 50 | 54* |
| LCS | 62 | 67 |
| MS | 58 | 61* |
| MSD | 66 | 69 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141550009A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7482399 | 79 | 82 |
| Blank | 80 | 85 |
| LCS | 83 | 84 |
| LCSD | 86 | 86 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141550010A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7482399 | 75 | 84 |
| Blank | 66 | 76 |
| LCS | 70 | 76 |
| LCSD | 71 | 75 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 20b Glycols by EPA 8015C
Batch number: 141550025A

| | Tetramethylene glycol |
|---|---|
| 7482399 | 108 |
| Blank | 117 |
| LCS | 137 |
| MS | 110 |
| MSD | 134 |
| Limits: | 58-141 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14156001

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7482399 | 63 | 71 | 77 | 79 | 76 | 73 |
| Blank | 82 | 87 | 90 | 95 | 92 | 88 |
| OPR | 75 | 85 | 83 | 84 | 85 | 86 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7482399 | 65 | 62 | 70 | 71 | 76 | 78 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Surrogate Quality Control

| | | | | | | |
|---|---|---|---|---|---|---|
| Blank | 74 | 78 | 87 | 86 | 89 | 92 |
| OPR | 79 | 68 | 81 | 83 | 78 | 81 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7482399 | 77 | 81 | 78 | 70 | 63 | |
| Blank | 91 | 102 | 92 | 84 | 72 | |
| OPR | 82 | 90 | 88 | 80 | 74 | |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 | |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14157002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7482392 | 73 | 86 | 80 | 82 | 83 | 73 |
| 7482393 | 64 | 81 | 82 | 84 | 84 | 74 |
| 7482394 | 69 | 85 | 80 | 82 | 85 | 74 |
| 7482396 | 77 | 91 | 86 | 87 | 87 | 77 |
| 7482397 | 72 | 91 | 86 | 88 | 90 | 77 |
| 7482398 | 67 | 81 | 88 | 90 | 88 | 85 |
| Blank | 72 | 93 | 88 | 86 | 87 | 81 |
| MS | 83 | 100 | 91 | 91 | 92 | 85 |
| MSD | 78 | 96 | 84 | 86 | 87 | 79 |
| OPR | 67 | 89 | 80 | 83 | 82 | 75 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |
| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
| 7482392 | 64 | 79 | 97 | 91 | 77 | 86 |
| 7482393 | 63 | 67 | 87 | 83 | 74 | 85 |
| 7482394 | 65 | 74 | 94 | 89 | 75 | 82 |
| 7482396 | 66 | 83 | 100 | 98 | 83 | 90 |
| 7482397 | 65 | 79 | 99 | 97 | 81 | 89 |
| 7482398 | 74 | 63 | 84 | 78 | 82 | 91 |
| Blank | 70 | 77 | 102 | 95 | 76 | 88 |
| MS | 71 | 94 | 108 | 109 | 89 | 93 |
| MSD | 67 | 87 | 100 | 103 | 81 | 86 |
| OPR | 65 | 72 | 94 | 95 | 77 | 85 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |
| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF | |
| 7482392 | 80 | 80 | 93 | 60 | 49 | |
| 7482393 | 80 | 72 | 93 | 59 | 48 | |
| 7482394 | 79 | 77 | 90 | 61 | 50 | |
| 7482396 | 88 | 84 | 93 | 68 | 55 | |
| 7482397 | 85 | 83 | 94 | 64 | 53 | |
| 7482398 | 84 | 80 | 108 | 68 | 60 | |
| Blank | 81 | 82 | 102 | 62 | 51 | |
| MS | 90 | 97 | 94 | 74 | 60 | |
| MSD | 85 | 90 | 87 | 69 | 56 | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478251
Reported: 06/25/14 at 04:54 PM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| OPR | 81 | 80 | 95 | 64 | 53 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

A-13013
G-1478251
S-748239Z-99

**CDM Smith**

DateShipped: 5/29/2014
CarrierName: FedEx
AirbillNo: 770138544895

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140529-04
Cooler #: 1 and 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-052914 | 5/29/14 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Biphenyls only. |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Morpholine only. |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 2 - 40 mL Vial | 10 day | | | | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 1 - 250 mL Amber | 10 day | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 2 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | HCl | 1 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB1-052914 | 5/29/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

*Perchlorate by 314 was removed per TB.
NM 6/4/14

EB1 - TRENCH

# SSFL Phase 3 Chain of Custody

A-130 13
G-1478251
S-7482392-99

**CDM Smith**

DateShipped: 5/29/2014
CarrierName: FedEx
AirbillNo: 770138544895

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140529-03
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-503-SA5C-TR-0.5 | 5/29/14 08:05 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | X | X | X | X | | | | | | | X | | | | | | | | | | | | | | |
| SL-503-SA5C-TR-5.0 | 5/29/14 08:20 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | X | X | X | X | | | | | | | X | | | | | | | | | | | | | | |
| SL-503-SA5C-TR-5.0 | 5/29/14 08:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-503-SA5C-TR-7.5 | 5/29/14 09:00 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | X | X | X | X | | | | | | | X | | | | | | | | | | | | | | |
| SL-503-SA5C-TR-7.5 | 5/29/14 09:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| TB3-052914 | 5/29/14 08:00 | WQ | HCl | ~~3~~ 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | ~~X~~ | | | X | | | | | | | | | | | | | | | only TPH-GRO |
| SL-605-SA5C-TR-0.5 | 5/29/14 13:15 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | X | X | X | X | | | | | | | X | | | | | | | | | | | | | | |
| SL-605-SA5C-TR-5.0 | 5/29/14 13:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | X | X | X | X | | | | | | | X | | | | | | | | | | | | | | |
| SL-605-SA5C-TR-5.0 | 5/29/14 13:30 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-605-SA5C-TR-10.0 | 5/29/14 13:45 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | | | X | | X | X | X | X | X | X | | | | | | | X | | | | | | | | | | | | | | |
| SL-605-SA5C-TR-10.0 | 5/29/14 13:45 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Randy Roberts

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 52914 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/30/14 | 0945 |

TRENCHING

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/29/2014 A-13013
CarrierName: FedEx G-1478251
AirbillNo: 770138544895 S-748239299

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140529-04
Cooler #: 1 and 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH.

**Sampler:** Andrew Payne

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 05/29/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 5/30/14 | 0945 |

EBI- TRENCH

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15973

Group Number(s): 1478257

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/30/2014 9:45 |
| Number of Packages: | 6 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | No | | |
| Sample Date/Times match COC: | No | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs (≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:26 on 05/30/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 1.6 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 3 | DT131 | 1.0 | DT | Wet | Y | Bagged | N | N |
| 4 | DT131 | 0.9 | DT | Wet | Y | Bagged | N | N |
| 5 | DT131 | 1.6 | DT | Wet | Y | Bagged | N | N |
| 6 | DT131 | 1.1 | DT | Wet | Y | Bagged | N | N |

## Sample ID Discrepancy Details

| Sample ID on COC | Sample ID on Label | Comments |
|---|---|---|
| STS-PHY-SO-08_SM_CC-0.0 -1.0 | STS-PHY-SO-08_SM_CC-0.0 -1.0-MS | |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 15973

Group Number(s): 1478251

Client: CDM Smith

## Sample Date/Time Discrepancy Details

| Sample ID on COC | Date/Time on Label | Comments |
|---|---|---|
| STS-PHY-PT-23_YS_A-BG | 5/29/2014 10:45 | |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 05/31/2014
Group Number: 1478425
SDG: PH209
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-651-SA5C-TR-0.5 Soil | 7483433 |
| SL-651-SA5C-TR-5.0 Soil | 7483434 |
| SL-651-SA5C-TR-5.0 SS Soil | 7483435 |
| SL-651-SA5C-TR-5.0 IS Soil | 7483436 |
| SL-651-SA5C-TR-5.0 PDS Soil | 7483437 |
| SL-651-SA5C-TR-5.0 MS Soil | 7483438 |
| SL-651-SA5C-TR-5.0 MSD Soil | 7483439 |
| SL-651-SA5C-TR-5.0 DUP Soil | 7483440 |
| SL-951-SA5C-TR-5.0 Soil | 7483441 |
| SL-651-SA5C-TR-10.0 Soil | 7483442 |
| SL-651-SA5C-TR-15.0 Soil | 7483443 |
| TB3-053014 Water | 7483444 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,500 | U | 3,500 | 730 | | 1 |
| 10726 | Benzo(a)anthracene | 56-55-3 | 4 | J | 18 | 3 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 4 | J | 18 | 3 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 5 | J | 18 | 3 | | 1 |
| 10726 | Benzo(g,h,i)perylene | 191-24-2 | 4 | J | 18 | 3 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 520 | U | 520 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 34 | U | 34 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Chrysene | 218-01-9 | 5 | J | 18 | 3 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 520 | U | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,000 | U | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | Fluoranthene | 206-44-0 | 4 | J | 18 | 3 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 520 | U | 520 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 70 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 520 | U | 520 | 170 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | Pyrene | 129-00-0 | 5 | J | 18 | 3 | | 1 |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.2 | J | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.4 | J | 1.7 | 0.70 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Explosives** | **SW-846 8330A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 94 | U | 94 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 15 | J | 18 | 6.4 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.4 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.4 | | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.85 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.78 | | 1 |

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**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.36 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.36 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.2 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
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65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 10 | | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 18 | | 10 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,800 | | 40.9 | 7.37 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.09 | U | 4.09 | 0.757 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.28 | | 4.09 | 0.716 | | 1 |
| 06946 | Barium | 7440-39-3 | 96.8 | | 1.02 | 0.0337 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.703 | J | 1.02 | 0.0685 | | 1 |
| 07914 | Boron | 7440-42-8 | 1.78 | J | 10.2 | 0.859 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.02 | U | 1.02 | 0.0777 | | 1 |
| 01650 | Calcium | 7440-70-2 | 3,530 | | 20.4 | 3.41 | | 1 |
| 06951 | Chromium | 7440-47-3 | 20.8 | | 3.07 | 0.164 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.09 | | 1.02 | 0.101 | | 1 |
| 06953 | Copper | 7440-50-8 | 9.27 | | 2.04 | 0.296 | | 1 |
| 01654 | Iron | 7439-89-6 | 22,500 | | 40.9 | 3.70 | | 1 |
| 06955 | Lead | 7439-92-1 | 7.17 | | 3.07 | 0.511 | | 1 |
| 01656 | Lithium | 7439-93-2 | 22.8 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,070 | | 10.2 | 1.71 | | 1 |
| 06958 | Manganese | 7439-96-5 | 345 | | 1.02 | 0.0849 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.186 | J | 2.04 | 0.174 | | 1 |
| 06961 | Nickel | 7440-02-0 | 12.0 | | 2.04 | 0.133 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 447 | | 10.2 | 2.95 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,920 | | 102 | 8.53 | | 1 |
| 01667 | Sodium | 7440-23-5 | 76.3 | J | 102 | 17.1 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.73 | J | 10.2 | 0.225 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,170 | | 1.02 | 0.174 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 40.7 | | 1.02 | 0.133 | | 1 |
| 06972 | Zinc | 7440-66-6 | 60.2 | | 4.09 | 0.204 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.73 | J | 5.11 | 0.859 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.167 | J | 0.409 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.204 | U | 0.204 | 0.0266 | | 2 |
| 06144 | Strontium | 7440-24-6 | 22.4 | | 0.409 | 0.0695 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.329 | | 0.204 | 0.0307 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0624 | | 0.0173 | 0.0104 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.62 | | 0.42 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.5 C. | n.a. | 6.70 | | 0.0100 | 0.0100 | | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.1 | | 0.10 | 0.10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-651-SA5C-TR-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0479 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.170 | JBQ | 5.17 | 0.0449 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.134 | JBQ | 5.17 | 0.0429 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.552 | JB | 5.17 | 0.0447 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.518 | JBQ | 5.17 | 0.0409 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 7.89 | B | 5.17 | 0.0582 | | 1 |
| 11031 | OCDD | 3268-87-9 | 83.9 | B | 10.3 | 0.0444 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.129 | JQ | 1.03 | 0.0590 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.269 | JB | 5.17 | 0.0254 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.194 | JB | 5.17 | 0.0251 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.141 | JBQ | 5.17 | 0.0451 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.133 | JBQ | 5.17 | 0.0388 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.448 | JBQ | 5.17 | 0.0519 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.148 | JB | 5.17 | 0.0433 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.13 | JB | 5.17 | 0.0229 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0929 | JBQ | 5.17 | 0.0377 | | 1 |
| 11031 | OCDF | 39001-02-0 | 2.88 | JB | 10.3 | 0.0514 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.252 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 77 | 32 - 141 |
| 13C12-123678-HxCDD | 80 | 28 - 130 |
| 13C12-123789-HxCDD | 82 | 28 - 130 |
| 13C12-1234678-HpCDD | 73 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 80 | 24 - 169 |
| 13C12-12378-PeCDF | 89 | 24 - 185 |
| 13C12-23478-PeCDF | 83 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 81 | 26 - 123 |
| 13C12-234678-HxCDF | 73 | 28 - 136 |
| 13C12-123789-HxCDF | 67 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 56 | 26 - 138 |
| 13C12-OCDF | 49 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 06:54 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 06:15 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141550001A | 06/06/2014 18:50 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141540008A | 06/04/2014 13:25 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 18:43 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 09:49 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 02:06 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141540008A | 06/03/2014 13:45 | Seth A Farrier | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015B | 1 | 141550013A | 06/06/2014 21:01 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 15:48 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 22:08 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/05/2014 22:57 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14160002 | 06/12/2014 20:05 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14160002 | 06/09/2014 10:50 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483433**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:18 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65105 SDG#: PH209-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:46 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 07:10 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:10 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:10 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:10 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:45 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 17:17 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14151039401A | 05/31/2014 16:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,500 | U | 3,500 | 730 | | 1 |
| 10726 | Benzo(a)anthracene | 56-55-3 | 4 | J | 18 | 3 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 4 | J | 18 | 3 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 5 | J | 18 | 3 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 520 | U | 520 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 35 | U | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 520 | U | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,000 | U | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | Fluoranthene | 206-44-0 | 4 | J | 18 | 3 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 520 | U | 520 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 70 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 70 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 520 | U | 520 | 170 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenanthrene | 85-01-8 | 4 | J | 18 | 3 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | Pyrene | 129-00-0 | 4 | J | 18 | 3 | | 1 |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.83 | J | 1.7 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram. | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | | 24.37 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 38 | U | 38 | 13 | | 1 |
| 10401 | Dalapon | 75-99-0 | 94 | U | 94 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.5 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 13 | U | 13 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.4 | | 1 |

*=This limit was used in the evaluation of the final result
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**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.4 | | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.86 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.78 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-651-SA5C-TR-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.2 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.6 | J | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 8.8 | J | 10 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,500 | | 41.5 | 7.48 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.15 | U | 4.15 | 0.768 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.17 | J | 4.15 | 0.726 | | 1 |
| 06946 | Barium | 7440-39-3 | 60.7 | | 1.04 | 0.0342 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.448 | J | 1.04 | 0.0695 | | 1 |
| 07914 | Boron | 7440-42-8 | 1.75 | J | 10.4 | 0.872 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.04 | U | 1.04 | 0.0789 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,130 | | 20.8 | 3.47 | | 1 |
| 06951 | Chromium | 7440-47-3 | 9.38 | | 3.11 | 0.166 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.45 | | 1.04 | 0.103 | | 1 |
| 06953 | Copper | 7440-50-8 | 4.42 | | 2.08 | 0.301 | | 1 |
| 01654 | Iron | 7439-89-6 | 16,200 | | 41.5 | 3.76 | | 1 |
| 06955 | Lead | 7439-92-1 | 4.95 | | 3.11 | 0.519 | | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.2 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,340 | | 10.4 | 1.73 | | 1 |
| 06958 | Manganese | 7439-96-5 | 248 | | 1.04 | 0.0861 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.308 | J | 2.08 | 0.176 | | 1 |
| 06961 | Nickel | 7440-02-0 | 5.79 | | 2.08 | 0.135 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 334 | | 10.4 | 3.00 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,840 | | 104 | 8.66 | | 1 |
| 01667 | Sodium | 7440-23-5 | 71.3 | J | 104 | 17.3 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.63 | J | 10.4 | 0.228 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06970 | Titanium | 7440-32-6 | 878 | | 1.04 | 0.176 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 20.9 | | 1.04 | 0.135 | | 1 |
| 06972 | Zinc | 7440-66-6 | 56.7 | | 4.15 | 0.208 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.94 | J | 5.19 | 0.872 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.415 | U | 0.415 | 0.104 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.208 | U | 0.208 | 0.0270 | | 2 |
| 06144 | Strontium | 7440-24-6 | 9.45 | | 0.415 | 0.0706 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.227 | | 0.208 | 0.0311 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0165 | U | 0.0165 | 0.0099 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.42 | U | 0.42 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.85 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.6 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0610 JQ | 1.02 | 0.0372 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0418 JB | 5.11 | 0.0323 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0344 JBQ | 5.11 | 0.0243 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0769 JBQ | 5.11 | 0.0263 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0679 JBQ | 5.11 | 0.0242 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.10 JB | 5.11 | 0.0291 | | 1 |
| 11031 | OCDD | 3268-87-9 | 13.8 B | 10.2 | 0.0262 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.02 U | 1.02 | 0.0337 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.147 JB | 5.11 | 0.0190 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.163 JBQ | 5.11 | 0.0193 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0936 JB | 5.11 | 0.0244 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0888 JBQ | 5.11 | 0.0231 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 5.11 U | 5.11 | 0.0270 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0792 JB | 5.11 | 0.0226 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.321 JB | 5.11 | 0.0147 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.106 JBQ | 5.11 | 0.0227 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.634 JB | 10.2 | 0.0345 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0920 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 101 | 25 - 164 |
| 13C12-12378-PeCDD | 104 | 25 - 181 |
| 13C12-123478-HxCDD | 95 | 32 - 141 |
| 13C12-123678-HxCDD | 93 | 28 - 130 |
| 13C12-123789-HxCDD | 98 | 28 - 130 |
| 13C12-1234678-HpCDD | 90 | 23 - 140 |
| 13C12-OCDD | 77 | 17 - 157 |
| 13C12-2378-TCDF | 99 | 24 - 169 |
| 13C12-12378-PeCDF | 112 | 24 - 185 |
| 13C12-23478-PeCDF | 106 | 21 - 178 |
| 13C12-123478-HxCDF | 88 | 26 - 152 |
| 13C12-123678-HxCDF | 96 | 26 - 123 |
| 13C12-234678-HxCDF | 92 | 28 - 136 |
| 13C12-123789-HxCDF | 86 | 29 - 147 |
| 13C12-1234678-HpCDF | 99 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 05:36 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 04:38 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 00:16 | Laura M Krieger | 24.37 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415134672 | 05/31/2014 16:40 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415134672 | 05/31/2014 16:40 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141550001A | 06/06/2014 19:32 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141540008A | 06/04/2014 13:52 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 18:56 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 10:57 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 02:25 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141540008A | 06/03/2014 13:45 | Seth A Farrier | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015B | 1 | 141550013A | 06/06/2014 21:16 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 14:41 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 22:30 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/05/2014 23:18 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

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**Sample Description: SL-651-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483434**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14160002 | 06/13/2014 02:56 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14160002 | 06/09/2014 10:50 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 11:22 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:11 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:13 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:13 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:13 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:13 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:47 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 16:46 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14151039401A | 05/31/2014 16:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 SS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483435**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02SS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 7199** | | mg/kg | mg/kg | mg/kg | mg/kg | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 33.3 | 2.1 | 0.73 | | 5 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 14155243201A | 06/05/2014 16:38 | Clinton M Wilson | 5 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 IS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483436**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02IS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 7199** | | mg/kg | mg/kg | mg/kg | mg/kg | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 768 | 40.9 | 14.3 | | 100 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 17:33 | Clinton M Wilson | 100 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 PDS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483437**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02PDS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 7199** | | mg/kg | mg/kg | mg/kg | mg/kg | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 43.9 | 4.2 | 1.5 | | 10 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 14155243201A | 06/05/2014 17:57 | Clinton M Wilson | 10 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Acenaphthene | 83-32-9 | 1,500 | | 18 | 3 | | 1 |
| 10726 | Acenaphthylene | 208-96-8 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Aniline | 62-53-3 | 1,100 | | 520 | 170 | | 1 |
| 10726 | Anthracene | 120-12-7 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Benzidine | 92-87-5 | 1,300 | J | 3,500 | 730 | | 1 |
| 10726 | Benzo(a)anthracene | 56-55-3 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 1,700 | | 18 | 3 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 1,500 | | 18 | 3 | | 1 |
| 10726 | Benzo(g,h,i)perylene | 191-24-2 | 1,700 | | 18 | 3 | | 1 |
| 10726 | Benzo(k)fluoranthene | 207-08-9 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 2,600 | | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 1,600 | | 520 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 1,600 | | 35 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 1,600 | | 35 | 17 | | 1 |
| 10726 | Butylbenzylphthalate | 85-68-7 | 1,600 | | 170 | 70 | | 1 |
| 10726 | Di-n-butylphthalate | 84-74-2 | 1,600 | | 170 | 70 | | 1 |
| 10726 | Carbazole | 86-74-8 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 760 | | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 1,500 | | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 1,500 | | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 1,500 | | 35 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 1,600 | | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 1,600 | | 35 | 17 | | 1 |
| 10726 | Chrysene | 218-01-9 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Dibenz(a,h)anthracene | 53-70-3 | 1,700 | | 18 | 3 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 660 | | 350 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 1,600 | | 35 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 17 | | 1 |
| 10726 | Diethylphthalate | 84-66-2 | 1,500 | | 170 | 70 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 1,900 | | 170 | 35 | | 1 |
| 10726 | Dimethylphthalate | 131-11-3 | 1,500 | | 170 | 70 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 1,300 | | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 2,000 | | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 1,500 | | 35 | 17 | | 1 |
| 10726 | bis(2-Ethylhexyl)phthalate | 117-81-7 | 1,600 | | 180 | 70 | | 1 |
| 10726 | Fluoranthene | 206-44-0 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Fluorene | 86-73-7 | 1,500 | | 18 | 3 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 1,700 | | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 1,700 | | 35 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 3,400 | | 520 | 170 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | ug/kg | ug/kg | ug/kg | |
| 10726 | Hexachloroethane | 67-72-1 | 1,500 | 170 | 35 | | 1 |
| 10726 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1,700 | 18 | 3 | | 1 |
| 10726 | Isophorone | 78-59-1 | 1,600 | 35 | 17 | | 1 |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 1,500 | 18 | 3 | | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 1,500 | 18 | 3 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 1,500 | 35 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 1,400 | 35 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | |
| 10726 | Naphthalene | 91-20-3 | 1,500 | 18 | 3 | | 1 |
| 10726 | NDPA as diphenylamine | n.a. | 1,500 | 170 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 1,600 | 35 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 1,400 | 170 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 1,200 | 170 | 70 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 1,500 | 35 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 1,700 | 35 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 1,300 | 520 | 170 | | 1 |
| 10726 | N-Nitrosodimethylamine | 62-75-9 | 1,500 | 170 | 70 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 1,400 | 35 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 1,600 | 35 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | |
| 10726 | Di-n-octylphthalate | 117-84-0 | 1,800 | 170 | 70 | | 1 |
| 10726 | Pentachlorophenol | 87-86-5 | 1,500 | 180 | 35 | | 1 |
| 10726 | Phenanthrene | 85-01-8 | 1,500 | 18 | 3 | | 1 |
| 10726 | Phenol | 108-95-2 | 1,500 | 35 | 17 | | 1 |
| 10726 | Pyrene | 129-00-0 | 1,500 | 18 | 3 | | 1 |
| 10726 | Pyridine | 110-86-1 | 1,300 | 170 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 1,700 | 35 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 1,600 | 35 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 1,700 | 35 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | |
| **GC/MS Semivolatiles SW-846 8270D SIM** | | | ug/kg | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 33 | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 34 | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 34 | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 30 | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 34 | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 27 | 18 | 3.5 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 29 | | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 27 | | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 34 | | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 34 | | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 32 | | 1.7 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 32 | | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 28 | | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 31 | | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 36 | | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 33 | | 1.7 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 32 | | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 34 | | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 33 | | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 35 | | 1.7 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 34 | | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 29 | | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 36 | | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 35 | | 1.7 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 29 | | 1.7 | 0.70 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 8.3 | | 1.0 | 0.2 | | 24.7 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 5,300 | | 310 | 160 | | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 4,700 | | 310 | 100 | | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 5,300 | | 310 | 100 | | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 5,200 | | 310 | 100 | | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 5,000 | | 310 | 100 | | 1 |
| 10132 | HMX | 2691-41-0 | 5,000 | | 420 | 210 | | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 4,800 | | 310 | 100 | | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 19,000 | | 2,100 | 1,000 | | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 5,000 | | 310 | 210 | | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 4,800 | | 310 | 260 | | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 4,800 | | 310 | 210 | | 1 |
| 10132 | PETN | 78-11-5 | 41,000 | | 2,100 | 1,000 | | 1 |
| 10132 | RDX | 121-82-4 | 5,000 | | 310 | 140 | | 1 |
| 10132 | Tetryl | 479-45-8 | 4,100 | | 310 | 170 | | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 5,200 | | 310 | 100 | | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 4,800 | | 310 | 100 | | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 96 | | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 94 | U | 94 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 99 | | 18 | 6.5 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 8.7 | J | 12 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 17 | J | 25 | 9.4 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 120 | | 18 | 9.4 | | 1 |
| 10401 | MCPA | 94-74-6 | 7,700 | | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 7,400 | | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 11 | | 1.8 | 0.85 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 10 | | 1.8 | 0.78 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 110 | | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 3.3 | | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.3 | | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.4 | | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.5 | | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 8.3 | | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 7.9 | | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 8.1 | | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.5 | | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 7.4 | | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.4 | | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.8 | | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.7 | | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 7.5 | | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.4 | | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 6.5 | | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.5 | | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.5 | | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 40 | | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 200 | | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 210 | | 18 | 4.0 | | 1 |

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**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 45 | | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 180 | | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 190 | | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 6.3 | J | 10 | 5.2 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 2.4 | | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 2.4 | | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 2.3 | | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.0 | J | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 8.4 | | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 17 | | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 18 | | 10 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.7 | J | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 3.9 | J | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.2 | | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 20 | | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | | 10 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 2.8 | J | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,700 | | 40.3 | 7.27 | | 1 |
| 06944 | Antimony | 7440-36-0 | 35.9 | | 4.03 | 0.746 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 17.8 | | 4.03 | 0.706 | | 1 |
| 06946 | Barium | 7440-39-3 | 257 | | 1.01 | 0.0333 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.52 | | 1.01 | 0.0675 | | 1 |
| 07914 | Boron | 7440-42-8 | 192 | | 10.1 | 0.847 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 4.97 | | 1.01 | 0.0766 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,270 | | 20.2 | 3.37 | | 1 |
| 06951 | Chromium | 7440-47-3 | 27.9 | | 3.02 | 0.161 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 52.4 | | 1.01 | 0.0998 | | 1 |
| 06953 | Copper | 7440-50-8 | 29.5 | | 2.02 | 0.292 | | 1 |
| 01654 | Iron | 7439-89-6 | 15,200 | | 40.3 | 3.65 | | 1 |
| 06955 | Lead | 7439-92-1 | 18.9 | | 3.02 | 0.504 | | 1 |
| 01656 | Lithium | 7439-93-2 | 126 | | 4.0 | 0.34 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,430 | | 10.1 | 1.68 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06958 | Manganese | 7439-96-5 | 281 | 1.01 | 0.0837 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 196 | 2.02 | 0.171 | | 1 |
| 06961 | Nickel | 7440-02-0 | 54.9 | 2.02 | 0.131 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 409 | 10.1 | 2.91 | | 1 |
| 01662 | Potassium | 7440-09-7 | 4,010 | 101 | 8.41 | | 1 |
| 01667 | Sodium | 7440-23-5 | 1,070 | 101 | 16.8 | | 1 |
| 06969 | Tin | 7440-31-5 | 375 | 10.1 | 0.222 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,100 | 1.01 | 0.171 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 71.4 | 1.01 | 0.131 | | 1 |
| 06972 | Zinc | 7440-66-6 | 105 | 4.03 | 0.202 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 104 | 5.04 | 0.847 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.14 | 0.403 | 0.101 | | 2 |
| 06142 | Silver | 7440-22-4 | 10.2 | 0.202 | 0.0262 | | 2 |
| 06144 | Strontium | 7440-24-6 | 17.3 | 0.403 | 0.0685 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.643 | 0.202 | 0.0302 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.188 | 0.0171 | 0.0103 | | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-651-SA5C-TR-5.0 MS Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.3 | | 0.999 | 0.0783 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 93.7 | B | 5.00 | 0.0609 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 95.1 | B | 5.00 | 0.0459 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 93.0 | B | 5.00 | 0.0471 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 92.9 | B | 5.00 | 0.0447 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 92.2 | B | 5.00 | 0.0673 | | 1 |
| 11031 | OCDD | 3268-87-9 | 176 | B | 9.99 | 0.0554 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 19.8 | | 0.999 | 0.0703 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 92.9 | B | 5.00 | 0.0432 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 93.3 | B | 5.00 | 0.0421 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 93.5 | B | 5.00 | 0.0796 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 94.8 | B | 5.00 | 0.0728 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 94.1 | B | 5.00 | 0.0873 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 93.6 | B | 5.00 | 0.0744 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 90.1 | B | 5.00 | 0.0466 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 90.7 | B | 5.00 | 0.0694 | | 1 |
| 11031 | OCDF | 39001-02-0 | 181 | B | 9.99 | 0.0617 | | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 81 | 25 - 164 |
| 13C12-12378-PeCDD | 96 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 88 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 81 | 24 - 169 |
| 13C12-12378-PeCDF | 97 | 24 - 185 |
| 13C12-23478-PeCDF | 95 | 21 - 178 |
| 13C12-123478-HxCDF | 79 | 26 - 152 |
| 13C12-123678-HxCDF | 88 | 26 - 123 |
| 13C12-234678-HxCDF | 83 | 28 - 136 |
| 13C12-123789-HxCDF | 80 | 29 - 147 |
| 13C12-1234678-HpCDF | 100 | 28 - 143 |
| 13C12-1234789-HpCDF | 73 | 26 - 138 |
| 13C12-OCDF | 64 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
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Collected: 05/30/2014 08:40 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 06:02 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 05:10 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 00:53 | Laura M Krieger | 24.7 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415134672 | 05/31/2014 16:41 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415134672 | 05/31/2014 16:41 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141550001A | 06/06/2014 20:15 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141540008A | 06/04/2014 14:18 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 19:21 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 11:11 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 02:43 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141540008A | 06/03/2014 13:45 | Seth A Farrier | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015B | 1 | 141550013A | 06/06/2014 23:15 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 15:04 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 22:51 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/05/2014 23:40 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

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**Sample Description: SL-651-SA5C-TR-5.0 MS Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483438**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14160002 | 06/13/2014 03:53 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14160002 | 06/09/2014 10:50 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 11:34 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:23 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:20 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:20 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:20 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:20 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:57 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

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**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Acenaphthene | 83-32-9 | 1,500 | | 18 | 3 | | 1 |
| 10726 | Acenaphthylene | 208-96-8 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Aniline | 62-53-3 | 1,200 | | 520 | 170 | | 1 |
| 10726 | Anthracene | 120-12-7 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Benzidine | 92-87-5 | 1,500 | J | 3,500 | 730 | | 1 |
| 10726 | Benzo(a)anthracene | 56-55-3 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 1,700 | | 18 | 3 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Benzo(g,h,i)perylene | 191-24-2 | 1,700 | | 18 | 3 | | 1 |
| 10726 | Benzo(k)fluoranthene | 207-08-9 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 2,700 | | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 1,700 | | 520 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 1,600 | | 35 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 1,600 | | 35 | 17 | | 1 |
| 10726 | Butylbenzylphthalate | 85-68-7 | 1,500 | | 170 | 70 | | 1 |
| 10726 | Di-n-butylphthalate | 84-74-2 | 1,600 | | 170 | 70 | | 1 |
| 10726 | Carbazole | 86-74-8 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 1,200 | | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 1,500 | | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 1,500 | | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 1,500 | | 35 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 1,500 | | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 1,600 | | 35 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 1,600 | | 35 | 17 | | 1 |
| 10726 | Chrysene | 218-01-9 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Dibenz(a,h)anthracene | 53-70-3 | 1,800 | | 18 | 3 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 1,100 | | 350 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 1,700 | | 35 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 17 | | 1 |
| 10726 | Diethylphthalate | 84-66-2 | 1,500 | | 170 | 70 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 1,500 | | 35 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 2,000 | | 170 | 35 | | 1 |
| 10726 | Dimethylphthalate | 131-11-3 | 1,500 | | 170 | 70 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 1,100 | | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,500 | | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 1,500 | | 35 | 17 | | 1 |
| 10726 | bis(2-Ethylhexyl)phthalate | 117-81-7 | 1,600 | | 180 | 70 | | 1 |
| 10726 | Fluoranthene | 206-44-0 | 1,600 | | 18 | 3 | | 1 |
| 10726 | Fluorene | 86-73-7 | 1,500 | | 18 | 3 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 1,700 | | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 1,700 | | 35 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 3,300 | | 520 | 170 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | ug/kg | ug/kg | ug/kg | |
| 10726 | Hexachloroethane | 67-72-1 | 1,500 | 170 | 35 | | 1 |
| 10726 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1,700 | 18 | 3 | | 1 |
| 10726 | Isophorone | 78-59-1 | 1,600 | 35 | 17 | | 1 |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 1,500 | 18 | 3 | | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 1,500 | 18 | 3 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 1,600 | 35 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 1,500 | 35 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | |
| 10726 | Naphthalene | 91-20-3 | 1,500 | 18 | 3 | | 1 |
| 10726 | NDPA as diphenylamine | n.a. | 1,600 | 170 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 1,700 | 35 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 1,500 | 170 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 1,200 | 170 | 70 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 1,500 | 35 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 1,700 | 35 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 1,300 | 520 | 170 | | 1 |
| 10726 | N-Nitrosodimethylamine | 62-75-9 | 1,600 | 170 | 70 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 1,400 | 35 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 1,600 | 35 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | |
| 10726 | Di-n-octylphthalate | 117-84-0 | 1,800 | 170 | 70 | | 1 |
| 10726 | Pentachlorophenol | 87-86-5 | 1,500 | 180 | 35 | | 1 |
| 10726 | Phenanthrene | 85-01-8 | 1,500 | 18 | 3 | | 1 |
| 10726 | Phenol | 108-95-2 | 1,500 | 35 | 17 | | 1 |
| 10726 | Pyrene | 129-00-0 | 1,500 | 18 | 3 | | 1 |
| 10726 | Pyridine | 110-86-1 | 1,400 | 170 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 1,700 | 35 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 1,700 | 35 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 1,700 | 35 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | |
| **GC/MS Semivolatiles SW-846 8270D SIM** | | | ug/kg | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 34 | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 34 | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 35 | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 34 | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 30 | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 35 | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 27 | 18 | 3.5 | | 1 |

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**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 31 | | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 28 | | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 34 | | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 34 | | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 32 | | 1.7 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 33 | | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 29 | | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 31 | | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 35 | | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 34 | | 1.7 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 33 | | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 34 | | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 33 | | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 36 | | 1.7 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 35 | | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 29 | | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 36 | | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 35 | | 1.7 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 29 | | 1.7 | 0.70 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 8.8 | | 1.0 | 0.2 | | 24.8 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 5,700 | | 310 | 160 | | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 5,100 | | 310 | 100 | | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 5,600 | | 310 | 100 | | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 5,500 | | 310 | 100 | | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 5,300 | | 310 | 100 | | 1 |
| 10132 | HMX | 2691-41-0 | 5,700 | | 420 | 210 | | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 5,100 | | 310 | 100 | | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 22,000 | | 2,100 | 1,000 | | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 5,200 | | 310 | 210 | | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 5,100 | | 310 | 260 | | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 5,200 | | 310 | 210 | | 1 |
| 10132 | PETN | 78-11-5 | 43,000 | | 2,100 | 1,000 | | 1 |
| 10132 | RDX | 121-82-4 | 5,400 | | 310 | 140 | | 1 |
| 10132 | Tetryl | 479-45-8 | 4,500 | | 310 | 170 | | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 5,600 | | 310 | 100 | | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 5,100 | | 310 | 100 | | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |

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**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 96 | | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 120 | | 93 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 100 | | 18 | 6.4 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 10 | J | 12 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 41 | | 25 | 9.3 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 140 | | 18 | 9.3 | | 1 |
| 10401 | MCPA | 94-74-6 | 11,000 | | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 7,100 | | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 12 | | 1.8 | 0.85 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 9.8 | | 1.8 | 0.78 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 110 | | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 3.0 | | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.1 | | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.1 | | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.2 | | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 7.5 | | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 7.2 | | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 7.3 | | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.2 | | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.5 | | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.1 | | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.2 | | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.3 | | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 6.9 | | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.0 | | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 6.0 | | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.2 | | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.2 | | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 37 | | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 190 | | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 190 | | 18 | 4.0 | | 1 |

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**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 52 | | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 200 | | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 220 | | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 8.5 | J | 10 | 5.2 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 2.7 | | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 2.7 | | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 2.5 | | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.9 | J | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 7.9 | | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 16 | | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 16 | | 10 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.7 | J | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.2 | J | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.5 | | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 11 | | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | | 10 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.1 | J | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,200 | | 41.1 | 7.41 | | 1 |
| 06944 | Antimony | 7440-36-0 | 34.2 | | 4.11 | 0.760 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.0 | | 4.11 | 0.719 | | 1 |
| 06946 | Barium | 7440-39-3 | 274 | | 1.03 | 0.0339 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.89 | | 1.03 | 0.0689 | | 1 |
| 07914 | Boron | 7440-42-8 | 200 | | 10.3 | 0.863 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.02 | | 1.03 | 0.0781 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,990 | | 20.6 | 3.43 | | 1 |
| 06951 | Chromium | 7440-47-3 | 31.7 | | 3.08 | 0.164 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 53.3 | | 1.03 | 0.102 | | 1 |
| 06953 | Copper | 7440-50-8 | 34.1 | | 2.06 | 0.298 | | 1 |
| 01654 | Iron | 7439-89-6 | 19,200 | | 41.1 | 3.72 | | 1 |
| 06955 | Lead | 7439-92-1 | 21.4 | | 3.08 | 0.514 | | 1 |
| 01656 | Lithium | 7439-93-2 | 132 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,230 | | 10.3 | 1.72 | | 1 |

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**Sample Description:** SL-651-SA5C-TR-5.0 MSD Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | mg/kg | mg/kg | mg/kg | mg/kg | |
| 06958 | Manganese | 7439-96-5 | 303 | 1.03 | 0.0853 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 199 | 2.06 | 0.175 | | 1 |
| 06961 | Nickel | 7440-02-0 | 56.8 | 2.06 | 0.134 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 504 | 10.3 | 2.97 | | 1 |
| 01662 | Potassium | 7440-09-7 | 4,320 | 103 | 8.57 | | 1 |
| 01667 | Sodium | 7440-23-5 | 1,100 | 103 | 17.2 | | 1 |
| 06969 | Tin | 7440-31-5 | 378 | 10.3 | 0.226 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,190 | 1.03 | 0.175 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 78.9 | 1.03 | 0.134 | | 1 |
| 06972 | Zinc | 7440-66-6 | 117 | 4.11 | 0.206 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 107 | 5.14 | 0.863 | | 1 |
| | **SW-846 6020A** | | mg/kg | mg/kg | mg/kg | mg/kg | |
| 06141 | Selenium | 7782-49-2 | 2.24 | 0.411 | 0.103 | | 2 |
| 06142 | Silver | 7440-22-4 | 10.4 | 0.206 | 0.0267 | | 2 |
| 06144 | Strontium | 7440-24-6 | 18.2 | 0.411 | 0.0699 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.634 | 0.206 | 0.0308 | | 2 |
| | **SW-846 7471B** | | mg/kg | mg/kg | mg/kg | mg/kg | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.192 | 0.0172 | 0.0103 | | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | | 1 |

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**Sample Description:** SL-651-SA5C-TR-5.0 MSD Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7483439**
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Collected: 05/30/2014 08:40 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 18.9 | | 1.03 | 0.0768 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 98.3 | B | 5.16 | 0.0603 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 95.1 | B | 5.16 | 0.0558 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 95.2 | B | 5.16 | 0.0578 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 95.1 | B | 5.16 | 0.0519 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 95.5 | B | 5.16 | 0.0593 | | 1 |
| 11031 | OCDD | 3268-87-9 | 184 | B | 10.3 | 0.0461 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.2 | | 1.03 | 0.0682 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 95.0 | B | 5.16 | 0.0396 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 96.4 | B | 5.16 | 0.0387 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 96.0 | B | 5.16 | 0.0819 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 96.4 | B | 5.16 | 0.0733 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 95.1 | B | 5.16 | 0.0905 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 97.9 | B | 5.16 | 0.0742 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 92.4 | B | 5.16 | 0.0465 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 93.1 | B | 5.16 | 0.0764 | | 1 |
| 11031 | OCDF | 39001-02-0 | 187 | B | 10.3 | 0.0510 | | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 85 | 25 - 164 |
| 13C12-12378-PeCDD | 96 | 25 - 181 |
| 13C12-123478-HxCDD | 93 | 32 - 141 |
| 13C12-123678-HxCDD | 93 | 28 - 130 |
| 13C12-123789-HxCDD | 97 | 28 - 130 |
| 13C12-1234678-HpCDD | 91 | 23 - 140 |
| 13C12-OCDD | 85 | 17 - 157 |
| 13C12-2378-TCDF | 86 | 24 - 169 |
| 13C12-12378-PeCDF | 99 | 24 - 185 |
| 13C12-23478-PeCDF | 95 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 92 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 107 | 28 - 143 |
| 13C12-1234789-HpCDF | 75 | 26 - 138 |
| 13C12-OCDF | 67 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B* *Detected in Method Blank*
*U* *Undetected*
*J* *Estimated concentration between Estimated Detection Limit and Minimum Level*
*E* *Exceeds calibration range*
*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 06:28 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 05:43 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 01:31 | Laura M Krieger | 24.8 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415134672 | 05/31/2014 16:42 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415134672 | 05/31/2014 16:42 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141550001A | 06/06/2014 20:57 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141540008A | 06/04/2014 14:45 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 19:34 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 11:24 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 03:01 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141540008A | 06/03/2014 13:45 | Seth A Farrier | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | Glycols in Soil (Sonication) | SW-846 8015B | 1 | 141550013A | 06/06/2014 23:29 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 13:52 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 23:13 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 00:02 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 MSD Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483439**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14160002 | 06/13/2014 04:50 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14160002 | 06/09/2014 10:50 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:27 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:23 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:23 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:23 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:23 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:59 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 DUP Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483440**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 9,280 | | 40.7 | 7.34 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.07 | U | 4.07 | 0.753 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.46 | | 4.07 | 0.712 | | 1 |
| 06946 | Barium | 7440-39-3 | 61.9 | | 1.02 | 0.0336 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.463 | J | 1.02 | 0.0682 | | 1 |
| 07914 | Boron | 7440-42-8 | 2.06 | J | 10.2 | 0.855 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.02 | U | 1.02 | 0.0773 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,150 | | 20.4 | 3.40 | | 1 |
| 06951 | Chromium | 7440-47-3 | 9.81 | | 3.05 | 0.163 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.53 | | 1.02 | 0.101 | | 1 |
| 06953 | Copper | 7440-50-8 | 4.80 | | 2.04 | 0.295 | | 1 |
| 01654 | Iron | 7439-89-6 | 17,100 | | 40.7 | 3.68 | | 1 |
| 06955 | Lead | 7439-92-1 | 5.26 | | 3.05 | 0.509 | | 1 |
| 01656 | Lithium | 7439-93-2 | 23.8 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,520 | | 10.2 | 1.70 | | 1 |
| 06958 | Manganese | 7439-96-5 | 252 | | 1.02 | 0.0845 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.176 | J | 2.04 | 0.173 | | 1 |
| 06961 | Nickel | 7440-02-0 | 5.68 | | 2.04 | 0.132 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 354 | | 10.2 | 2.94 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,860 | | 102 | 8.49 | | 1 |
| 01667 | Sodium | 7440-23-5 | 71.5 | J | 102 | 17.0 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.68 | J | 10.2 | 0.224 | | 1 |
| 06970 | Titanium | 7440-32-6 | 927 | | 1.02 | 0.173 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 22.2 | | 1.02 | 0.132 | | 1 |
| 06972 | Zinc | 7440-66-6 | 59.3 | | 4.07 | 0.204 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.80 | J | 5.09 | 0.855 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.140 | J | 0.407 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.204 | U | 0.204 | 0.0265 | | 2 |
| 06144 | Strontium | 7440-24-6 | 10.4 | | 0.407 | 0.0692 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.245 | | 0.204 | 0.0305 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0172 | U | 0.0172 | 0.0103 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.42 | U | 0.42 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.85 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.5 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 4.9 | | 0.10 | 0.10 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 DUP Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483440**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | % | |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 11:30 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 22:19 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 06:18 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:18 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:18 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 06:18 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 09:51 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-5.0 DUP Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483440**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:40 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65150 SDG#: PH209-02DUP

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 18:04 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14151039401A | 05/31/2014 16:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:45 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,500 | U | 3,500 | 730 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 4 | J | 18 | 3 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 5 | J | 18 | 3 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 520 | U | 520 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 35 | U | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Chrysene | 218-01-9 | 4 | J | 18 | 3 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 520 | U | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,000 | U | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 520 | U | 520 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 70 | | 1 |

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**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:45 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 520 | U | 520 | 170 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.81 | J | 1.7 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.89 | J | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

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**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:45 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | | 24.18 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 93 | U | 93 | 45 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.4 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.3 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.3 | | 1 |

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**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
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3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.85 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.77 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015B** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.2 | | 1 |

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**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:45 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.2 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,300 | | 40.2 | 7.25 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.02 | U | 4.02 | 0.744 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.57 | J | 4.02 | 0.704 | | 1 |
| 06946 | Barium | 7440-39-3 | 71.2 | | 1.01 | 0.0332 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.559 | J | 1.01 | 0.0674 | | 1 |
| 07914 | Boron | 7440-42-8 | 1.62 | J | 10.1 | 0.845 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.01 | U | 1.01 | 0.0764 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,320 | | 20.1 | 3.36 | | 1 |
| 06951 | Chromium | 7440-47-3 | 11.8 | | 3.02 | 0.161 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.04 | | 1.01 | 0.0996 | | 1 |
| 06953 | Copper | 7440-50-8 | 5.43 | | 2.01 | 0.292 | | 1 |
| 01654 | Iron | 7439-89-6 | 18,400 | | 40.2 | 3.64 | | 1 |
| 06955 | Lead | 7439-92-1 | 5.64 | | 3.02 | 0.503 | | 1 |
| 01656 | Lithium | 7439-93-2 | 23.5 | | 4.0 | 0.34 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,660 | | 10.1 | 1.68 | | 1 |
| 06958 | Manganese | 7439-96-5 | 272 | | 1.01 | 0.0835 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.01 | U | 2.01 | 0.171 | | 1 |
| 06961 | Nickel | 7440-02-0 | 7.18 | | 2.01 | 0.131 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 318 | | 10.1 | 2.91 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,910 | | 101 | 8.39 | | 1 |
| 01667 | Sodium | 7440-23-5 | 71.2 | J | 101 | 16.8 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.69 | J | 10.1 | 0.221 | | 1 |
| 06970 | Titanium | 7440-32-6 | 943 | | 1.01 | 0.171 | | 1 |

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**SSFL Phase 3 Subarea 5C**

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Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06971 | Vanadium | 7440-62-2 | 25.8 | | 1.01 | 0.131 | | 1 |
| 06972 | Zinc | 7440-66-6 | 58.5 | | 4.02 | 0.201 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.32 | J | 5.03 | 0.845 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.143 | J | 0.402 | 0.101 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.201 | U | 0.201 | 0.0262 | | 2 |
| 06144 | Strontium | 7440-24-6 | 14.7 | | 0.402 | 0.0684 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.263 | | 0.201 | 0.0302 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0166 | U | 0.0166 | 0.0099 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.43 | U | 0.43 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.63 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.3 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.4 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:45 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 | U | 1.04 | 0.0537 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.18 | U | 5.18 | 0.0434 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0405 | JBQ | 5.18 | 0.0320 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.131 | JBQ | 5.18 | 0.0329 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.155 | JBQ | 5.18 | 0.0299 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.55 | JB | 5.18 | 0.0491 | | 1 |
| 11031 | OCDD | 3268-87-9 | 11.1 | B | 10.4 | 0.0328 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 | U | 1.04 | 0.0429 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.103 | JBQ | 5.18 | 0.0197 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0634 | JBQ | 5.18 | 0.0212 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.100 | JB | 5.18 | 0.0309 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0960 | JBQ | 5.18 | 0.0257 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.140 | JBQ | 5.18 | 0.0325 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0846 | JBQ | 5.18 | 0.0280 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.228 | JB | 5.18 | 0.0133 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.116 | JBQ | 5.18 | 0.0224 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.426 | JB | 10.4 | 0.0557 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0313 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 75 | 25 - 181 |
| 13C12-123478-HxCDD | 70 | 32 - 141 |
| 13C12-123678-HxCDD | 71 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 67 | 23 - 140 |
| 13C12-OCDD | 59 | 17 - 157 |
| 13C12-2378-TCDF | 67 | 24 - 169 |
| 13C12-12378-PeCDF | 79 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 61 | 26 - 152 |
| 13C12-123678-HxCDF | 72 | 26 - 123 |
| 13C12-234678-HxCDF | 65 | 28 - 136 |
| 13C12-123789-HxCDF | 62 | 29 - 147 |
| 13C12-1234678-HpCDF | 81 | 28 - 143 |
| 13C12-1234789-HpCDF | 51 | 26 - 138 |
| 13C12-OCDF | 42 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:45 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
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**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
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CDM Federal Programs Corp.
3201 Jermantown Road
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Fairfax VA 22030

95150 SDG#: PH209-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 07:20 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 06:47 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 07:00 | Laura M Krieger | 24.18 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415134672 | 05/31/2014 16:44 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415134672 | 05/31/2014 16:44 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141550001A | 06/06/2014 21:40 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141540008A | 06/04/2014 15:12 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 19:47 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 11:51 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 03:20 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141540008A | 06/03/2014 13:45 | Seth A Farrier | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015B | 1 | 141550013A | 06/06/2014 21:31 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 16:11 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 19:37 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 00:23 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

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**Sample Description: SL-951-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483441**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:45 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

95150 SDG#: PH209-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14160002 | 06/12/2014 21:02 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14160002 | 06/09/2014 10:50 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/05/2014 12:18 | Joanne M Gates | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:50 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 07:13 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:13 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:13 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:13 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 10:02 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 18:20 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14151039401A | 05/31/2014 16:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
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**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 530 | U | 530 | 180 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,500 | U | 3,500 | 740 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 4 | J | 18 | 3 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 5 | J | 18 | 3 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 530 | U | 530 | 180 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 530 | U | 530 | 180 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 18 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 35 | U | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 110 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 180 | U | 180 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 530 | U | 530 | 180 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,100 | U | 1,100 | 320 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 530 | U | 530 | 180 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 180 | U | 180 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 18 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 180 | U | 180 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 180 | U | 180 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 180 | U | 180 | 70 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 18 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 530 | U | 530 | 180 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 18 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 18 | | 1 |
| 10726 | Pyridine | 110-86-1 | 180 | U | 180 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 18 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | | 25.41 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 320 | U | 320 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,100 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 320 | U | 320 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 320 | U | 320 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 320 | U | 320 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,100 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 320 | U | 320 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 320 | U | 320 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 320 | U | 320 | 110 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 38 | U | 38 | 13 | | 1 |
| 10401 | Dalapon | 75-99-0 | 94 | U | 94 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.5 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 13 | U | 13 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.4 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.4 | | 1 |

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**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.86 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.78 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 0.57 | J | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015B** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12934 | Diethylene glycol | 111-46-6 | 11 | U | 11 | 5.3 | | 1 |

*=This limit was used in the evaluation of the final result
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**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Ethylene glycol | 107-21-1 | 11 | U | 11 | 5.3 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 11 | U | 11 | 5.3 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 11 | U | 11 | 5.3 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.2 | J | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 16,500 | | 41.2 | 7.43 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.12 | U | 4.12 | 0.762 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.29 | | 4.12 | 0.721 | | 1 |
| 06946 | Barium | 7440-39-3 | 103 | | 1.03 | 0.0340 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.683 | J | 1.03 | 0.0690 | | 1 |
| 07914 | Boron | 7440-42-8 | 2.29 | J | 10.3 | 0.865 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.03 | U | 1.03 | 0.0783 | | 1 |
| 01650 | Calcium | 7440-70-2 | 3,240 | | 20.6 | 3.44 | | 1 |
| 06951 | Chromium | 7440-47-3 | 18.1 | | 3.09 | 0.165 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.76 | | 1.03 | 0.102 | | 1 |
| 06953 | Copper | 7440-50-8 | 9.03 | | 2.06 | 0.299 | | 1 |
| 01654 | Iron | 7439-89-6 | 20,500 | | 41.2 | 3.73 | | 1 |
| 06955 | Lead | 7439-92-1 | 6.64 | | 3.09 | 0.515 | | 1 |
| 01656 | Lithium | 7439-93-2 | 21.8 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,150 | | 10.3 | 1.72 | | 1 |
| 06958 | Manganese | 7439-96-5 | 293 | | 1.03 | 0.0855 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.186 | J | 2.06 | 0.175 | | 1 |
| 06961 | Nickel | 7440-02-0 | 10.5 | | 2.06 | 0.134 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 307 | | 10.3 | 2.98 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,110 | | 103 | 8.59 | | 1 |
| 01667 | Sodium | 7440-23-5 | 169 | | 103 | 17.2 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.72 | J | 10.3 | 0.227 | | 1 |
| 06970 | Titanium | 7440-32-6 | 963 | | 1.03 | 0.175 | | 1 |

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**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06971 | Vanadium | 7440-62-2 | 34.2 | | 1.03 | 0.134 | | 1 |
| 06972 | Zinc | 7440-66-6 | 56.2 | | 4.12 | 0.206 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.47 | J | 5.15 | 0.865 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.129 | J | 0.412 | 0.103 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.206 | U | 0.206 | 0.0268 | | 2 |
| 06144 | Strontium | 7440-24-6 | 23.9 | | 0.412 | 0.0700 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.308 | | 0.206 | 0.0309 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0124 | J | 0.0169 | 0.0101 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.41 | J | 0.43 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.07 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.4 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.8 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0608 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0599 | JBQ | 5.07 | 0.0477 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0415 | JBQ | 5.07 | 0.0360 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.384 | JBQ | 5.07 | 0.0379 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.396 | JBQ | 5.07 | 0.0381 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.12 | JB | 5.07 | 0.0440 | | 1 |
| 11031 | OCDD | 3268-87-9 | 15.5 | B | 10.1 | 0.0293 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0779 | J | 1.01 | 0.0668 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.231 | JBQ | 5.07 | 0.0266 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.166 | JBQ | 5.07 | 0.0282 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0822 | JBQ | 5.07 | 0.0374 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.114 | JBQ | 5.07 | 0.0330 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.330 | JBQ | 5.07 | 0.0438 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.170 | JBQ | 5.07 | 0.0344 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.278 | JBQ | 5.07 | 0.0129 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.100 | JBQ | 5.07 | 0.0226 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.513 | JB | 10.1 | 0.0482 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0237 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 73 | 25 - 164 |
| 13C12-12378-PeCDD | 76 | 25 - 181 |
| 13C12-123478-HxCDD | 73 | 32 - 141 |
| 13C12-123678-HxCDD | 73 | 28 - 130 |
| 13C12-123789-HxCDD | 72 | 28 - 130 |
| 13C12-1234678-HpCDD | 71 | 23 - 140 |
| 13C12-OCDD | 67 | 17 - 157 |
| 13C12-2378-TCDF | 65 | 24 - 169 |
| 13C12-12378-PeCDF | 81 | 24 - 185 |
| 13C12-23478-PeCDF | 75 | 21 - 178 |
| 13C12-123478-HxCDF | 64 | 26 - 152 |
| 13C12-123678-HxCDF | 73 | 26 - 123 |
| 13C12-234678-HxCDF | 67 | 28 - 136 |
| 13C12-123789-HxCDF | 63 | 29 - 147 |
| 13C12-1234678-HpCDF | 88 | 28 - 143 |
| 13C12-1234789-HpCDF | 57 | 26 - 138 |
| 13C12-OCDF | 51 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 07:46 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 07:20 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 07:38 | Laura M Krieger | 25.41 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415134672 | 05/31/2014 16:45 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415134672 | 05/31/2014 16:45 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141550001A | 06/06/2014 22:22 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141540008A | 06/04/2014 15:39 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 19:59 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 12:05 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 03:38 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141540008A | 06/03/2014 13:45 | Seth A Farrier | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015B | 1 | 141550013A | 06/06/2014 21:46 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 16:33 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 19:58 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 00:45 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483442**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 09:22 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65110 SDG#: PH209-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14160002 | 06/13/2014 01:03 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14160002 | 06/09/2014 10:50 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:54 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 07:15 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:15 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:15 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:15 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 10:04 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 18:51 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14151039401A | 05/31/2014 16:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

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**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 530 | U | 530 | 180 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,500 | U | 3,500 | 740 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 4 | J | 18 | 4 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 4 | J | 18 | 4 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 530 | U | 530 | 180 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 530 | U | 530 | 180 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 18 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 35 | U | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 110 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 180 | U | 180 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 530 | U | 530 | 180 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,100 | U | 1,100 | 320 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 4 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 530 | U | 530 | 180 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 180 | U | 180 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 18 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 180 | U | 180 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 180 | U | 180 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 180 | U | 180 | 70 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 18 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 530 | U | 530 | 180 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 18 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 18 | | 1 |
| 10726 | Pyridine | 110-86-1 | 180 | U | 180 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 18 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.8 | U | 1.8 | 0.70 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | | 24.65 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 320 | U | 320 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,100 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 320 | U | 320 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 320 | U | 320 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 320 | U | 320 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,100 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 320 | U | 320 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 320 | U | 320 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 320 | U | 320 | 110 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 38 | U | 38 | 13 | | 1 |
| 10401 | Dalapon | 75-99-0 | 94 | U | 94 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.5 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 13 | U | 13 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.4 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.4 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.86 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.78 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.48 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015B** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12934 | Diethylene glycol | 111-46-6 | 11 | U | 11 | 5.3 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Ethylene glycol | 107-21-1 | 11 | U | 11 | 5.3 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 11 | U | 11 | 5.3 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 11 | U | 11 | 5.3 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.071 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.071 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.071 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | U | 11 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,600 | | 40.7 | 7.33 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.07 | U | 4.07 | 0.752 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.39 | | 4.07 | 0.711 | | 1 |
| 06946 | Barium | 7440-39-3 | 78.0 | | 1.02 | 0.0335 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.651 | J | 1.02 | 0.0681 | | 1 |
| 07914 | Boron | 7440-42-8 | 4.80 | J | 10.2 | 0.854 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.02 | U | 1.02 | 0.0772 | | 1 |
| 01650 | Calcium | 7440-70-2 | 4,390 | | 20.3 | 3.39 | | 1 |
| 06951 | Chromium | 7440-47-3 | 16.7 | | 3.05 | 0.163 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.66 | | 1.02 | 0.101 | | 1 |
| 06953 | Copper | 7440-50-8 | 7.40 | | 2.03 | 0.295 | | 1 |
| 01654 | Iron | 7439-89-6 | 19,500 | | 40.7 | 3.68 | | 1 |
| 06955 | Lead | 7439-92-1 | 4.94 | | 3.05 | 0.508 | | 1 |
| 01656 | Lithium | 7439-93-2 | 20.9 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,140 | | 10.2 | 1.70 | | 1 |
| 06958 | Manganese | 7439-96-5 | 275 | | 1.02 | 0.0844 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.03 | U | 2.03 | 0.173 | | 1 |
| 06961 | Nickel | 7440-02-0 | 9.66 | | 2.03 | 0.132 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 289 | | 10.2 | 2.94 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,820 | | 102 | 8.48 | | 1 |
| 01667 | Sodium | 7440-23-5 | 160 | | 102 | 17.0 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.55 | J | 10.2 | 0.224 | | 1 |
| 06970 | Titanium | 7440-32-6 | 945 | | 1.02 | 0.173 | | 1 |

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**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06971 | Vanadium | 7440-62-2 | 34.0 | | 1.02 | 0.132 | | 1 |
| 06972 | Zinc | 7440-66-6 | 49.9 | | 4.07 | 0.203 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.34 | J | 5.08 | 0.854 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.122 | J | 0.407 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0296 | J | 0.203 | 0.0264 | | 2 |
| 06144 | Strontium | 7440-24-6 | 19.3 | | 0.407 | 0.0691 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.274 | | 0.203 | 0.0305 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0160 | J | 0.0171 | 0.0103 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.44 | U | 0.44 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.14 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.6 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.4 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.04 U | 1.04 | 0.0490 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0497 JBQ | 5.21 | 0.0358 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0325 JBQ | 5.21 | 0.0273 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0864 JBQ | 5.21 | 0.0293 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.154 JBQ | 5.21 | 0.0262 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.808 JB | 5.21 | 0.0328 | | 1 |
| 11031 | OCDD | 3268-87-9 | 9.79 JB | 10.4 | 0.0186 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.04 U | 1.04 | 0.0443 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.118 JBQ | 5.21 | 0.0174 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0354 JB | 5.21 | 0.0175 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.104 JB | 5.21 | 0.0264 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0819 JB | 5.21 | 0.0242 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.168 JBQ | 5.21 | 0.0281 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0603 JBQ | 5.21 | 0.0242 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.232 JBQ | 5.21 | 0.0100 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0608 JB | 5.21 | 0.0158 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.620 JBQ | 10.4 | 0.0323 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0408 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 80 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 92 | 28 - 130 |
| 13C12-1234678-HpCDD | 86 | 23 - 140 |
| 13C12-OCDD | 79 | 17 - 157 |
| 13C12-2378-TCDF | 77 | 24 - 169 |
| 13C12-12378-PeCDF | 93 | 24 - 185 |
| 13C12-23478-PeCDF | 88 | 21 - 178 |
| 13C12-123478-HxCDF | 78 | 26 - 152 |
| 13C12-123678-HxCDF | 86 | 26 - 123 |
| 13C12-234678-HxCDF | 82 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 65 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 08:12 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 07:52 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 08:15 | Laura M Krieger | 24.65 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415134672 | 05/31/2014 16:47 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415134672 | 05/31/2014 16:47 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141550001A | 06/06/2014 23:05 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141540008A | 06/04/2014 16:06 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 20:12 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141530004A | 06/09/2014 12:19 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 03:57 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141530004A | 06/02/2014 15:00 | Kelli M Barto | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141540008A | 06/03/2014 13:45 | Seth A Farrier | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015B | 1 | 141550013A | 06/06/2014 22:01 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 16:55 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 20:20 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 01:07 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-651-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7483443**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 11:14 by RE

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65115 SDG#: PH209-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14160002 | 06/13/2014 01:59 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14160002 | 06/09/2014 10:50 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141540637001 | 06/04/2014 23:58 | John W Yanzuk II | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141540637001B | 06/05/2014 07:17 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:17 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:17 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141540637001A | 06/05/2014 07:17 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141540638001 | 06/09/2014 10:06 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141540637001 | 06/04/2014 08:27 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141540638001 | 06/05/2014 10:28 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 19:07 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14151039401A | 05/31/2014 16:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14156162401B | 06/05/2014 20:03 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: TB3-053014 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7483444**
**LL Group # 1478425**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 05/30/2014 08:00

Submitted: 05/31/2014 10:20
Reported: 07/07/2014 12:03

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

3--TB SDG#: PH209-06TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14150B94A | 06/03/2014 11:34 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14150B94A | 06/03/2014 11:34 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14154SLH026 | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| Acenaphthene | 17 | U | 17. | 3 | ug/kg | 86 | | 83-111 | | |
| Acenaphthylene | 17 | U | 17. | 3 | ug/kg | 93 | | 83-127 | | |
| Aniline | 500 U | | 500. | 170 | ug/kg | 66 | | 43-110 | | |
| Anthracene | 17 | U | 17. | 3 | ug/kg | 93 | | 82-118 | | |
| Benzidine | 3,300 U | | 3,300. | 700 | ug/kg | 33 | | 21-78 | | |
| Benzo(a)anthracene | 17 | U | 17. | 3 | ug/kg | 89 | | 81-117 | | |
| Benzo(a)pyrene | 17 | U | 17. | 3 | ug/kg | 98 | | 84-122 | | |
| Benzo(b)fluoranthene | 17 | U | 17. | 3 | ug/kg | 83 | | 83-124 | | |
| Benzo(g,h,i)perylene | 17 | U | 17. | 3 | ug/kg | 90 | | 82-120 | | |
| Benzo(k)fluoranthene | 17 | U | 17. | 3 | ug/kg | 99 | | 80-125 | | |
| Benzoic acid | 500 U | | 500. | 170 | ug/kg | 73 | | 41-122 | | |
| Benzyl alcohol | 500 U | | 500. | 170 | ug/kg | 103 | | 81-121 | | |
| 1,1'-Biphenyl | 33 | U | 33. | 17 | ug/kg | 85 | | 76-117 | | |
| 4-Bromophenyl-phenylether | 33 | U | 33. | 17 | ug/kg | 91 | | 84-120 | | |
| Butylbenzylphthalate | 170 U | | 170. | 67 | ug/kg | 84 | | 80-118 | | |
| Di-n-butylphthalate | 170 U | | 170. | 67 | ug/kg | 90 | | 84-120 | | |
| Carbazole | 33 | U | 33. | 17 | ug/kg | 88 | | 84-119 | | |
| 4-Chloro-3-methylphenol | 33 | U | 33. | 17 | ug/kg | 95 | | 86-128 | | |
| 4-Chloroaniline | 33 | U | 33. | 17 | ug/kg | 28 | | 10-105 | | |
| bis(2-Chloroethoxy)methane | 33 | U | 33. | 17 | ug/kg | 86 | | 71-121 | | |
| bis(2-Chloroethyl)ether | 33 | U | 33. | 17 | ug/kg | 88 | | 77-115 | | |
| bis(2-Chloroisopropyl)ether | 33 | U | 33. | 17 | ug/kg | 89 | | 56-129 | | |
| 2-Chloronaphthalene | 33 | U | 33. | 7 | ug/kg | 99 | | 63-146 | | |
| 2-Chlorophenol | 33 | U | 33. | 17 | ug/kg | 97 | | 80-122 | | |
| 4-Chlorophenyl-phenylether | 33 | U | 33. | 17 | ug/kg | 94 | | 83-115 | | |
| Chrysene | 17 | U | 17. | 3 | ug/kg | 91 | | 77-116 | | |
| Dibenz(a,h)anthracene | 17 | U | 17. | 3 | ug/kg | 93 | | 81-123 | | |
| Dibenzofuran | 33 | U | 33. | 17 | ug/kg | 89 | | 85-115 | | |
| 1,2-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 93 | | 79-112 | | |
| 1,3-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 91 | | 79-113 | | |
| 1,4-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 90 | | 79-112 | | |
| 3,3'-Dichlorobenzidine | 330 U | | 330. | 100 | ug/kg | 39 | | 10-125 | | |
| 2,4-Dichlorophenol | 33 | U | 33. | 17 | ug/kg | 97 | | 81-123 | | |
| 2,6-Dichlorophenol | 33 | U | 33. | 17 | ug/kg | 96 | 95 | 77-113 | 0 | 30 |
| Diethylphthalate | 170 U | | 170. | 67 | ug/kg | 87 | | 82-113 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4-Dimethylphenol | 33 | U | 33. | 17 | ug/kg | 93 | | 83-120 | | |
| 3,5-Dimethylphenol | 170 | U | 170. | 33 | ug/kg | 120 | | 70-130 | | |
| Dimethylphthalate | 170 | U | 170. | 67 | ug/kg | 88 | | 82-113 | | |
| 4,6-Dinitro-2-methylphenol | 500 | U | 500. | 170 | ug/kg | 64* | | 67-131 | | |
| 2,4-Dinitrophenol | 1,000 | U | 1,000. | 300 | ug/kg | 44 | | 35-141 | | |
| 1,2-Diphenylhydrazine | 33 | U | 33. | 17 | ug/kg | 88 | | 77-111 | | |
| bis(2-Ethylhexyl)phthalate | 170 | U | 170. | 67 | ug/kg | 87 | | 75-124 | | |
| Fluoranthene | 17 | U | 17. | 3 | ug/kg | 90 | | 79-123 | | |
| Fluorene | 17 | U | 17. | 3 | ug/kg | 91 | | 86-118 | | |
| Hexachlorobenzene | 17 | U | 17. | 3 | ug/kg | 96 | | 80-121 | | |
| Hexachlorobutadiene | 33 | U | 33. | 17 | ug/kg | 92 | | 78-121 | | |
| Hexachlorocyclopentadiene | 500 | U | 500. | 170 | ug/kg | 91 | | 66-159 | | |
| Hexachloroethane | 170 | U | 170. | 33 | ug/kg | 88 | | 78-114 | | |
| Indeno(1,2,3-cd)pyrene | 17 | U | 17. | 3 | ug/kg | 89 | | 84-121 | | |
| Isophorone | 33 | U | 33. | 17 | ug/kg | 93 | | 77-119 | | |
| 1-Methylnaphthalene | 17 | U | 17. | 3 | ug/kg | 89 | | 77-115 | | |
| 2-Methylnaphthalene | 17 | U | 17. | 3 | ug/kg | 88 | | 83-109 | | |
| 2-Methylphenol | 33 | U | 33. | 17 | ug/kg | 100 | | 82-125 | | |
| 4-Methylphenol | 33 | U | 33. | 17 | ug/kg | 95 | | 78-126 | | |
| Naphthalene | 17 | U | 17. | 3 | ug/kg | 87 | | 83-112 | | |
| NDPA as diphenylamine | 170 | U | 170. | 33 | ug/kg | 91 | | 70-130 | | |
| 2-Nitroaniline | 33 | U | 33. | 17 | ug/kg | 94 | | 84-126 | | |
| 3-Nitroaniline | 170 | U | 170. | 67 | ug/kg | 82 | | 66-128 | | |
| 4-Nitroaniline | 170 | U | 170. | 67 | ug/kg | 56* | | 57-106 | | |
| Nitrobenzene | 33 | U | 33. | 17 | ug/kg | 88 | | 73-118 | | |
| 2-Nitrophenol | 33 | U | 33. | 17 | ug/kg | 91 | | 83-125 | | |
| 4-Nitrophenol | 500 | U | 500. | 170 | ug/kg | 78 | | 58-128 | | |
| N-Nitroso-di-n-propylamine | 33 | U | 33. | 17 | ug/kg | 88 | | 70-119 | | |
| N-Nitrosodimethylamine | 170 | U | 170. | 67 | ug/kg | 87 | | 67-116 | | |
| N-Nitrosodiphenylamine | 33 | U | 33. | 17 | ug/kg | 92 | | 83-118 | | |
| Di-n-octylphthalate | 170 | U | 170. | 67 | ug/kg | 97 | | 82-134 | | |
| Pentachlorophenol | 170 | U | 170. | 33 | ug/kg | 86 | | 57-128 | | |
| Phenanthrene | 17 | U | 17. | 3 | ug/kg | 87 | | 85-116 | | |
| Phenol | 33 | U | 33. | 17 | ug/kg | 96 | | 76-124 | | |
| Pyrene | 17 | U | 17. | 3 | ug/kg | 84 | | 81-114 | | |
| Pyridine | 170 | U | 170. | 67 | ug/kg | 75 | | 51-109 | | |
| 1,2,4-Trichlorobenzene | 33 | U | 33. | 17 | ug/kg | 92 | | 84-119 | | |
| 2,4,5-Trichlorophenol | 33 | U | 33. | 17 | ug/kg | 95 | | 86-123 | | |
| 2,4,6-Trichlorophenol | 33 | U | 33. | 17 | ug/kg | 95 | | 81-123 | | |

Batch number: 14154SLI026 Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 86 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 77* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 83 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 87 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 80-119 | | |
| Batch number: 14150B94A | Sample number(s): 7483444 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 97 | 92 | 80-133 | 6 | 30 |
| Batch number: 14154A16A | Sample number(s): 7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 141550001A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 300 U | | 300. | 150 | ug/kg | 113 | | 81-133 | | |
| 2-Amino-4,6-Dinitrotoluene | 300 U | | 300. | 100 | ug/kg | 102 | | 79-120 | | |
| 2,6-Diamino-4-nitrotoluene | 400 U | | 400. | 200 | ug/kg | 100 | 100 | 59-133 | 0 | 30 |
| 2,4-Diamino-6-nitrotoluene | 400 U | | 400. | 200 | ug/kg | 99 | 99 | 58-132 | 0 | 30 |
| 1,3-Dinitrobenzene | 300 U | | 300. | 100 | ug/kg | 114 | | 94-124 | | |
| 2,4-Dinitrotoluene | 300 U | | 300. | 100 | ug/kg | 111 | | 83-125 | | |
| 2,6-Dinitrotoluene | 300 U | | 300. | 100 | ug/kg | 105 | | 72-137 | | |
| HMX | 400 U | | 400. | 200 | ug/kg | 112 | | 65-121 | | |
| Nitrobenzene | 300 U | | 300. | 100 | ug/kg | 102 | | 81-116 | | |
| Nitroglycerin | 2,000 U | | 2,000. | 1,000 | ug/kg | 95 | | 70-118 | | |
| 2-Nitrotoluene | 300 U | | 300. | 200 | ug/kg | 105 | | 86-113 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 3-Nitrotoluene | 300 U | | 300. | 250 | ug/kg | 103 | | 85-135 | | |
| 4-Nitrotoluene | 300 U | | 300. | 200 | ug/kg | 104 | | 80-122 | | |
| PETN | 2,000 U | | 2,000. | 1,000 | ug/kg | 158* | | 64-121 | | |
| RDX | 300 U | | 300. | 130 | ug/kg | 107 | | 84-122 | | |
| Tetryl | 300 U | | 300. | 160 | ug/kg | 92 | | 67-152 | | |
| 1,3,5-Trinitrobenzene | 300 U | | 300. | 100 | ug/kg | 112 | | 83-119 | | |
| 2,4,6-Trinitrotoluene | 300 U | | 300. | 100 | ug/kg | 102 | | 82-133 | | |
| Batch number: 141540008A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| 2,4-D | 36 | U | 36. | 12 | ug/kg | 112 | | 68-160 | | |
| Dalapon | 90 | U | 90. | 44 | ug/kg | 61 | | 13-128 | | |
| 2,4-DB | 17 | U | 17. | 6.2 | ug/kg | 102 | | 73-159 | | |
| Dicamba | 12 | U | 12. | 4.0 | ug/kg | 110 | | 64-128 | | |
| Dinoseb | 24 | U | 24. | 9.0 | ug/kg | 34 | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 | U | 17. | 9.0 | ug/kg | 149 | | 86-178 | | |
| MCPA | 2,500 U | | 2,500. | 760 | ug/kg | 95 | | 61-123 | | |
| MCPP (Mecoprop) | 2,500 U | | 2,500. | 750 | ug/kg | 93 | | 59-128 | | |
| 2,4,5-T | 1.7 | U | 1.7 | 0.82 | ug/kg | 119 | | 69-157 | | |
| 2,4,5-TP | 1.7 | U | 1.7 | 0.75 | ug/kg | 121 | | 78-146 | | |
| Batch number: 141550002A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| 6a Perchlorate (Method 6850) | 5.0 | U | 5.0 | 2.1 | ug/kg | 102 | | 85-115 | | |
| Batch number: 141530004A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 86 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 88 | | 55-135 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 89 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 91 | | 56-138 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 100 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 89 | | 59-137 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 68-134 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 88 | | 56-128 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 92 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 85 | | 61-125 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 89 | | 69-126 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 89 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 94 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 100 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141540027A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 96 | 97 | 36-106 | 1 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 116 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 125 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141550013A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 100 | | 54-149 | | |
| Ethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 98 | | 76-122 | | |
| Propylene glycol | 10 | U | 10. | 5.0 | mg/kg | 102 | | 67-131 | | |
| Triethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 100 | | 34-145 | | |
| Batch number: 141540029A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 108 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 110 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 109 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 75 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 60-115 | | |
| Batch number: 141540030A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 79 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 82 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 83 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 66 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 58* | | 60-115 | | |
| Batch number: 141560017A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| m-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 99 | | 64-111 | | |
| o-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 96 | | 75-125 | | |
| p-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 90 | | 69-109 | | |
| Batch number: 141540637001 | Sample number(s): 7483433-7483434,7483438-7483443 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 105 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 106 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 105 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 106 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 9.64 | J | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 105 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 106 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 107 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 105 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 102 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 109 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.45 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 105 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 108 | | 80-120 | | |
| Zinc | 4.00 | U | 4.00 | 0.200 | mg/kg | 104 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 106 | | 80-120 | | |
| Batch number: 141540637001A | Sample number(s): 7483433-7483434,7483438-7483443 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 111 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 113 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 112 | | 80-120 | | |
| Batch number: 141540637001B | Sample number(s): 7483433-7483434,7483438-7483443 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 107 | | 80-120 | | |
| Batch number: 141540638001 | Sample number(s): 7483433-7483434,7483438-7483443 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 99 | | 85-120 | | |
| Batch number: 14155243201A | Sample number(s): 7483433-7483437,7483440-7483443 | | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 0.40 | U | 0.40 | 0.14 | mg/kg | 89 | | 80-120 | | |
| Batch number: 14151039401A | Sample number(s): 7483433-7483434,7483440-7483443 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14156162401B | Sample number(s): 7483433-7483443 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14160002 | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0486 | ng/kg | 100 | | 67-158 | | |
| 12378-PeCDD | 0.0623 | J | 5.00 | 0.0314 | ng/kg | 97 | | 70-142 | | |
| 123478-HxCDD | 0.0505 | J | 5.00 | 0.0211 | ng/kg | 97 | | 70-164 | | |
| 123678-HxCDD | 0.0328 | J | 5.00 | 0.0226 | ng/kg | 97 | | 76-134 | | |
| 123789-HxCDD | 0.0326 | J | 5.00 | 0.0213 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.159 | J | 5.00 | 0.0201 | ng/kg | 94 | | 70-140 | | |
| OCDD | 0.459 | J | 10.0 | 0.0215 | ng/kg | 91 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0379 | ng/kg | 109 | | 75-158 | | |
| 12378-PeCDF | 0.0587 | J | 5.00 | 0.0170 | ng/kg | 98 | | 80-134 | | |
| 23478-PeCDF | 0.0596 | J | 5.00 | 0.0168 | ng/kg | 98 | | 68-160 | | |
| 123478-HxCDF | 0.0633 | J | 5.00 | 0.0159 | ng/kg | 95 | | 72-134 | | |
| 123678-HxCDF | 0.0543 | J | 5.00 | 0.0144 | ng/kg | 98 | | 84-130 | | |
| 123789-HxCDF | 0.0652 | J | 5.00 | 0.0156 | ng/kg | 97 | | 78-130 | | |
| 234678-HxCDF | 0.0505 | J | 5.00 | 0.0147 | ng/kg | 98 | | 70-156 | | |
| 1234678-HpCDF | 0.0496 | J | 5.00 | 0.00822 | ng/kg | 94 | | 82-122 | | |
| 1234789-HpCDF | 0.0531 | J | 5.00 | 0.0120 | ng/kg | 96 | | 78-138 | | |
| OCDF | 0.217 | J | 10.0 | 0.0258 | ng/kg | 95 | | 63-170 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| TEQ WHO 2005 - EDLx0.0 | 0.0132 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14154SLH026 | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| Acenaphthene | 88 | 89 | 61-128 | 1 | 30 | | | | |
| Acenaphthylene | 93 | 93 | 67-130 | 1 | 30 | | | | |
| Aniline | 62 | 70 | 10-131 | 13 | 30 | | | | |
| Anthracene | 92 | 93 | 41-142 | 1 | 30 | | | | |
| Benzidine | 15* | 17* | 35-141 | 12 | 30 | | | | |
| Benzo(a)anthracene | 92 | 92 | 32-150 | 0 | 30 | | | | |
| Benzo(a)pyrene | 94 | 97 | 36-151 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 84 | 92 | 29-150 | 8 | 30 | | | | |
| Benzo(g,h,i)perylene | 96 | 99 | 41-147 | 3 | 30 | | | | |
| Benzo(k)fluoranthene | 89 | 92 | 44-145 | 3 | 30 | | | | |
| Benzoic acid | 76 | 76 | 23-170 | 1 | 30 | | | | |
| Benzyl alcohol | 93 | 96 | 32-145 | 4 | 30 | | | | |
| 1,1'-Biphenyl | 90 | 89 | 64-120 | 0 | 30 | | | | |
| 4-Bromophenyl-phenylether | 94 | 94 | 66-122 | 0 | 30 | | | | |
| Butylbenzylphthalate | 89 | 87 | 67-126 | 2 | 30 | | | | |
| Di-n-butylphthalate | 91 | 90 | 70-124 | 1 | 30 | | | | |
| Carbazole | 86 | 86 | 63-126 | 0 | 30 | | | | |
| 4-Chloro-3-methylphenol | 85 | 87 | 61-131 | 2 | 30 | | | | |
| 4-Chloroaniline | 43 | 67 | 11-114 | 43* | 30 | | | | |
| bis(2-Chloroethoxy)methane | 85 | 86 | 58-122 | 1 | 30 | | | | |
| bis(2-Chloroethyl)ether | 85 | 86 | 66-122 | 2 | 30 | | | | |
| bis(2-Chloroisopropyl)ether | 84 | 84 | 50-115 | 0 | 30 | | | | |
| 2-Chloronaphthalene | 91 | 83 | 50-140 | 9 | 30 | | | | |
| 2-Chlorophenol | 88 | 91 | 71-130 | 3 | 30 | | | | |
| 4-Chlorophenyl-phenylether | 92 | 92 | 65-117 | 1 | 30 | | | | |
| Chrysene | 89 | 90 | 28-146 | 1 | 30 | | | | |
| Dibenz(a,h)anthracene | 100 | 101 | 54-142 | 1 | 30 | | | | |
| Dibenzofuran | 88 | 88 | 65-124 | 0 | 30 | | | | |
| 1,2-Dichlorobenzene | 87 | 89 | 72-114 | 2 | 30 | | | | |
| 1,3-Dichlorobenzene | 86 | 89 | 67-118 | 3 | 30 | | | | |
| 1,4-Dichlorobenzene | 86 | 87 | 68-119 | 2 | 30 | | | | |
| 3,3'-Dichlorobenzidine | 38 | 63 | 10-143 | 50* | 30 | | | | |
| 2,4-Dichlorophenol | 93 | 94 | 54-135 | 1 | 30 | | | | |
| 2,6-Dichlorophenol | 0* | 0* | 56-133 | 0 | 30 | | | | |
| Diethylphthalate | 84 | 84 | 66-120 | 1 | 30 | | | | |
| 2,4-Dimethylphenol | 84 | 84 | 62-132 | 0 | 30 | | | | |
| 3,5-Dimethylphenol | 111 | 114 | 70-130 | 2 | 30 | | | | |
| Dimethylphthalate | 86 | 86 | 69-119 | 1 | 30 | | | | |
| 4,6-Dinitro-2-methylphenol | 76 | 65 | 10-148 | 16 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2,4-Dinitrophenol | 56 | 44 | 20-143 | 24 | 30 | | | | |
| 1,2-Diphenylhydrazine | 87 | 87 | 51-145 | 0 | 30 | | | | |
| bis(2-Ethylhexyl)phthalate | 93 | 92 | 60-134 | 0 | 30 | | | | |
| Fluoranthene | 89 | 89 | 30-151 | 0 | 30 | | | | |
| Fluorene | 87 | 88 | 55-128 | 1 | 30 | | | | |
| Hexachlorobenzene | 98 | 98 | 46-132 | 1 | 30 | | | | |
| Hexachlorobutadiene | 100 | 98 | 65-125 | 2 | 30 | | | | |
| Hexachlorocyclopentadiene | 98 | 94 | 10-153 | 4 | 30 | | | | |
| Hexachloroethane | 85 | 84 | 24-138 | 1 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 95 | 98 | 44-147 | 2 | 30 | | | | |
| Isophorone | 92 | 92 | 68-119 | 0 | 30 | | | | |
| 1-Methylnaphthalene | 86 | 86 | 82-115 | 0 | 30 | | | | |
| 2-Methylnaphthalene | 85 | 86 | 39-140 | 1 | 30 | | | | |
| 2-Methylphenol | 87 | 89 | 62-133 | 3 | 30 | | | | |
| 4-Methylphenol | 82 | 85 | 59-132 | 4 | 30 | | | | |
| Naphthalene | 88 | 89 | 44-142 | 0 | 30 | | | | |
| NDPA as diphenylamine | 88 | 89 | 70-130 | 1 | 30 | | | | |
| 2-Nitroaniline | 92 | 95 | 64-131 | 3 | 30 | | | | |
| 3-Nitroaniline | 81 | 84 | 31-145 | 4 | 30 | | | | |
| 4-Nitroaniline | 67 | 70 | 30-131 | 5 | 30 | | | | |
| Nitrobenzene | 88 | 88 | 63-125 | 0 | 30 | | | | |
| 2-Nitrophenol | 95 | 95 | 45-146 | 0 | 30 | | | | |
| 4-Nitrophenol | 73 | 73 | 25-142 | 1 | 30 | | | | |
| N-Nitroso-di-n-propylamine | 79 | 82 | 58-126 | 3 | 30 | | | | |
| N-Nitrosodimethylamine | 85 | 89 | 52-117 | 4 | 30 | | | | |
| N-Nitrosodiphenylamine | 89 | 90 | 59-135 | 1 | 30 | | | | |
| Di-n-octylphthalate | 102 | 103 | 48-155 | 1 | 30 | | | | |
| Pentachlorophenol | 89 | 88 | 23-145 | 0 | 30 | | | | |
| Phenanthrene | 86 | 86 | 34-147 | 1 | 30 | | | | |
| Phenol | 86 | 87 | 61-130 | 2 | 30 | | | | |
| Pyrene | 83 | 84 | 29-148 | 1 | 30 | | | | |
| Pyridine | 75 | 80 | 16-108 | 6 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 97 | 97 | 66-116 | 0 | 30 | | | | |
| 2,4,5-Trichlorophenol | 93 | 96 | 64-131 | 3 | 30 | | | | |
| 2,4,6-Trichlorophenol | 98 | 99 | 60-136 | 1 | 30 | | | | |
| Batch number: 14154SLI026 | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| Acenaphthene | 95 | 98 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 96 | 97 | 60-128 | 1 | 30 | | | | |
| Anthracene | 100 | 102 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 98 | 99 | 44-143 | 0 | 30 | | | | |
| Benzo(a)pyrene | 85 | 87 | 49-137 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 98 | 99 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 77 | 63-111 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 83 | 87 | 33-141 | 5 | 30 | | | | |
| Benzo(k)fluoranthene | 79 | 80 | 49-144 | 2 | 30 | | | | |
| Butylbenzylphthalate | 96 | 97 | 64-156 | 0 | 30 | | | | |
| Di-n-butylphthalate | 98 | 97 | 52-147 | 2 | 30 | | | | |
| Chrysene | 92 | 92 | 43-141 | 0 | 30 | | | | |
| Dibenz(a,h)anthracene | 92 | 96 | 25-145 | 4 | 30 | | | | |
| Diethylphthalate | 81 | 84 | 66-140 | 3 | 30 | | | | |
| Dimethylphthalate | 88 | 88 | 70-123 | 1 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 103 | 101 | 48-164 | 2 | 30 | | | | |
| Fluoranthene | 96 | 98 | 38-153 | 2 | 30 | | | | |
| Fluorene | 93 | 94 | 57-130 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 98 | 98 | 26-139 | 0 | 30 | | | | |
| 1-Methylnaphthalene | 93 | 94 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 97 | 99 | 46-147 | 2 | 30 | | | | |
| Naphthalene | 98 | 99 | 52-136 | 1 | 30 | | | | |
| N-Nitrosodimethylamine | 84 | 84 | 39-134 | 1 | 30 | | | | |
| Di-n-octylphthalate | 102 | 102 | 52-162 | 0 | 30 | | | | |
| Phenanthrene | 101 | 100 | 50-137 | 1 | 30 | | | | |
| Pyrene | 83 | 82 | 26-143 | 1 | 30 | | | | |
| Batch number: 14154A16A | Sample number(s): 7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 72 | 77 | 69-123 | 6 | 30 | | | | |
| Batch number: 141550001A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 101 | 108 | 85-118 | 7 | 50 | | | | |
| 2-Amino-4,6-Dinitrotoluene | 90 | 98 | 69-113 | 8 | 50 | | | | |
| 1,3-Dinitrobenzene | 101 | 107 | 89-119 | 6 | 50 | | | | |
| 2,4-Dinitrotoluene | 99 | 105 | 81-111 | 6 | 50 | | | | |
| 2,6-Dinitrotoluene | 95 | 101 | 86-114 | 6 | 50 | | | | |
| HMX | 96 | 108* | 72-107 | 12 | 50 | | | | |
| Nitrobenzene | 91 | 97 | 86-108 | 6 | 50 | | | | |
| Nitroglycerin | 90 | 104 | 73-116 | 14 | 50 | | | | |
| 2-Nitrotoluene | 95 | 100 | 79-112 | 5 | 50 | | | | |
| 3-Nitrotoluene | 92 | 98 | 72-119 | 6 | 50 | | | | |
| 4-Nitrotoluene | 92 | 99 | 90-118 | 7 | 50 | | | | |
| PETN | 195* | 206* | 71-133 | 5 | 50 | | | | |
| RDX | 96 | 103 | 75-108 | 8 | 50 | | | | |
| Tetryl | 77 | 86 | 58-125 | 11 | 50 | | | | |
| 1,3,5-Trinitrobenzene | 99 | 107 | 58-135 | 8 | 50 | | | | |
| 2,4,6-Trinitrotoluene | 91* | 97 | 92-114 | 6 | 50 | | | | |
| Batch number: 141540008A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| 2,4-D | 111 | 111 | 42-143 | 0 | 35 | | | | |
| Dalapon | 0* | 55 | 16-98 | 200* | 50 | | | | |
| 2,4-DB | 114 | 118 | 10-179 | 3 | 50 | | | | |
| Dicamba | 101 | 116 | 47-150 | 14 | 50 | | | | |
| Dinoseb | 12 | 28 | 10-115 | 82* | 35 | | | | |
| 2,4-DP (Dichlorprop) | 142 | 164 | 32-171 | 14 | 50 | | | | |
| MCPA | 89 | 122 | 54-138 | 31 | 50 | | | | |
| MCPP (Mecoprop) | 85 | 82 | 46-138 | 4 | 50 | | | | |
| 2,4,5-T | 125 | 137 | 12-172 | 9 | 35 | | | | |
| 2,4,5-TP | 117 | 114 | 65-156 | 3 | 35 | | | | |
| Batch number: 141550002A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 105 | 102 | 80-120 | 3 | 20 | | | | |
| Batch number: 141530004A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| Aldrin | 94 | 85 | 16-126 | 10 | 50 | | | | |
| Alpha BHC | 93 | 86 | 14-140 | 8 | 50 | | | | |
| Beta BHC | 95 | 86 | 42-133 | 9 | 50 | | | | |

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**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Gamma BHC - Lindane | 96 | 88 | 30-137 | 9 | 50 | | | | |
| p,p-DDD | 109 | 99 | 43-149 | 10 | 50 | | | | |
| p,p-DDE | 112 | 103 | 35-152 | 9 | 50 | | | | |
| p,p-DDT | 107 | 98 | 12-193 | 9 | 50 | | | | |
| Delta BHC | 98 | 90 | 13-153 | 9 | 50 | | | | |
| Dieldrin | 100 | 88 | 41-153 | 12 | 50 | | | | |
| Endosulfan I | 91 | 83 | 26-146 | 9 | 50 | | | | |
| Endosulfan II | 96 | 88 | 34-141 | 9 | 50 | | | | |
| Endosulfan Sulfate | 96 | 89 | 10-181 | 7 | 50 | | | | |
| Endrin | 98 | 90 | 30-152 | 9 | 50 | | | | |
| Endrin Aldehyde | 88 | 82 | 23-138 | 6 | 50 | | | | |
| Endrin Ketone | 92 | 85 | 30-148 | 8 | 50 | | | | |
| Heptachlor | 95 | 87 | 16-152 | 9 | 50 | | | | |
| Heptachlor Epoxide | 99 | 90 | 33-144 | 10 | 50 | | | | |
| Methoxychlor | 106 | 97 | 41-161 | 8 | 50 | | | | |
| Batch number: 141540027A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| PCB-1016 | 115 | 110 | 41-135 | 4 | 50 | | | | |
| PCB-1260 | 121 | 113 | 40-134 | 7 | 50 | | | | |
| Batch number: 141550013A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| Diethylene glycol | 21* | 25* | 59-109 | 15 | 20 | | | | |
| Ethylene glycol | 84 | 96 | 63-107 | 14 | 20 | | | | |
| Propylene glycol | 93 | 108* | 63-107 | 15 | 20 | | | | |
| Triethylene glycol | 3* | 4* | 66-122 | 30* | 20 | | | | |
| Batch number: 141540029A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| EFH (C12-C14) | 94 | 92 | 49-123 | 2 | 20 | | | | |
| EFH (C15-C20) | 107 | 100 | 49-123 | 7 | 20 | | | | |
| EFH (C21-C30) | 96 | 83 | 49-123 | 10 | 20 | | | | |
| EFH (C30-C40) | 58 | 47* | 49-123 | 10 | 20 | | | | |
| EFH (C8-C11) | 90 | 89 | 49-123 | 1 | 20 | | | | |
| Batch number: 141540030A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 74 | 79 | 49-123 | 7 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 79 | 82 | 49-123 | 5 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 155* | 84 | 49-123 | 59* | 20 | | | | |
| EFH C30-C40 w/ SiGel | 73 | 72 | 49-123 | 1 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 53 | 59 | 49-123 | 11 | 20 | | | | |
| Batch number: 141560017A | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | |
| m-Terphenyl | 89 | 97 | 75-125 | 9 | 20 | | | | |
| o-Terphenyl | 87 | 96 | 75-125 | 9 | 20 | | | | |
| p-Terphenyl | 83 | 90 | 75-125 | 8 | 20 | | | | |
| Batch number: 141540637001 | Sample number(s): 7483433-7483434,7483438-7483443 UNSPK: 7483434 BKG: 7483434 | | | | | | | | |
| Aluminum | 618 (2) | 1777 (2) | 75-125 | 20 | 20 | 9,070 | 8,860 | 2 | 20 |
| Antimony | 71* | 67* | 75-125 | 5 | 20 | 3.96 U | 3.88 U | 0 (1) | 20 |
| Arsenic | 97 | 103 | 75-125 | 6 | 20 | 3.02 J | 6.16 | 68* (1) | 20 |
| Barium | 98 | 104 | 75-125 | 6 | 20 | 57.9 | 59.0 | 2 | 20 |
| Beryllium | 101 | 106 | 75-125 | 6 | 20 | 0.428 J | 0.442 J | 3 (1) | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | | DUP Conc | | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 95 | 96 | 75-125 | 4 | 20 | 1.67 | J | 1.97 | J | 16 (1) | 20 |
| Cadmium | 99 | 98 | 75-125 | 1 | 20 | 0.990 | U | 0.971 | U | 0 (1) | 20 |
| Calcium | 33 (2) | 209 (2) | 75-125 | 28* | 20 | 2,040 | | 2,050 | | 1 | 20 |
| Chromium | 92 | 109 | 75-125 | 13 | 20 | 8.95 | | 9.36 | | 5 (1) | 20 |
| Cobalt | 97 | 97 | 75-125 | 2 | 20 | 3.29 | | 3.36 | | 2 (1) | 20 |
| Copper | 100 | 115 | 75-125 | 14 | 20 | 4.22 | | 4.58 | | 8 (1) | 20 |
| Iron | -955 (2) | 2923 (2) | 75-125 | 23* | 20 | 15,500 | | 16,300 | | 6 | 20 |
| Lead | 92 | 106 | 75-125 | 12 | 20 | 4.72 | | 5.01 | | 6 (1) | 20 |
| Lithium | 103 | 106 | 75-125 | 4 | 20 | 21.4 | | 22.7 | | 6 | 20 |
| Magnesium | 44 (2) | 433 (2) | 75-125 | 21* | 20 | 3,190 | | 3,350 | | 5 | 20 |
| Manganese | 64 (2) | 106 (2) | 75-125 | 8 | 20 | 237 | | 241 | | 2 | 20 |
| Molybdenum | 97 | 97 | 75-125 | 2 | 20 | 0.294 | J | 0.168 | J | 55* (1) | 20 |
| Nickel | 98 | 99 | 75-125 | 3 | 20 | 5.52 | | 5.42 | | 2 (1) | 20 |
| Phosphorus | 75 | 166* | 75-125 | 21* | 20 | 318 | | 338 | | 6 | 20 |
| Potassium | 116 | 145* | 75-125 | 8 | 20 | 2,710 | | 2,720 | | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 3 | 20 | 68.0 | J | 68.2 | J | 0 (1) | 20 |
| Tin | 92 | 91 | 75-125 | 1 | 20 | 2.50 | J | 2.55 | J | 2 (1) | 20 |
| Titanium | 219 (2) | 305 (2) | 75-125 | 8 | 20 | 838 | | 884 | | 5 | 20 |
| Vanadium | 100 | 113 | 75-125 | 10 | 20 | 19.9 | | 21.1 | | 6 | 20 |
| Zinc | 96 | 117 | 75-125 | 11 | 20 | 54.1 | | 56.6 | | 4 | 20 |
| Zirconium | 102 | 102 | 75-125 | 2 | 20 | 1.85 | J | 2.67 | J | 36* (1) | 20 |
| Batch number: 141540637001A | Sample number(s): 7483433-7483434,7483438-7483443 UNSPK: 7483434 BKG: 7483434 | | | | | | | | | | |
| Silver | 101 | 102 | 75-125 | 2 | 20 | 0.198 | U | 0.194 | U | 0 (1) | 20 |
| Strontium | 97 | 107 | 75-125 | 5 | 20 | 9.02 | | 9.92 | | 10 | 20 |
| Thallium | 103 | 99 | 75-125 | 1 | 20 | 0.216 | | 0.234 | | 8 (1) | 20 |
| Batch number: 141540637001B | Sample number(s): 7483433-7483434,7483438-7483443 UNSPK: 7483434 BKG: 7483434 | | | | | | | | | | |
| Selenium | 106 | 109 | 75-125 | 4 | 20 | 0.396 | U | 0.133 | J | 200* (1) | 20 |
| Batch number: 141540638001 | Sample number(s): 7483433-7483434,7483438-7483443 UNSPK: 7483434 BKG: 7483434 | | | | | | | | | | |
| 3a Mercury 7471A | 110 | 111 | 65-135 | 2 | 20 | 0.0157 | U | 0.0164 | U | 0 (1) | 20 |
| Batch number: 14155243201A | Sample number(s): 7483433-7483437,7483440-7483443 UNSPK: 7483434 BKG: 7483434 | | | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 80 | | 75-125 | | | 0.40 | U | 0.40 | U | 0 (1) | 20 |
| Batch number: 14151039401A | Sample number(s): 7483433-7483434,7483440-7483443 BKG: 7483434 | | | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.85 | | 7.85 | | 0 | 3 |
| Batch number: 14156162401B | Sample number(s): 7483433-7483443 BKG: 7483434 | | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | | 4.9 | | 7 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | | 4.9 | | 7 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | | 4.9 | | 7 | 20 |
| Batch number: 14160002 | Sample number(s): 7483433-7483434,7483438-7483439,7483441-7483443 UNSPK: 7483434 | | | | | | | | | | |
| 2378-TCDD | 91 | 92 | 40-135 | 4 | 20 | | | | | | |
| 12378-PeCDD | 94 | 95 | 40-135 | 5 | 20 | | | | | | |
| 123478-HxCDD | 95 | 92 | 40-135 | 0 | 20 | | | | | | |
| 123678-HxCDD | 93 | 92 | 40-135 | 2 | 20 | | | | | | |
| 123789-HxCDD | 93 | 92 | 40-135 | 2 | 20 | | | | | | |
| 1234678-HpCDD | 90 | 91 | 40-135 | 4 | 20 | | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| OCDD | 81 | 83 | 40-135 | 4 | 20 | | | | |
| 2378-TCDF | 99 | 103 | 40-135 | 7 | 20 | | | | |
| 12378-PeCDF | 93 | 92 | 40-135 | 2 | 20 | | | | |
| 23478-PeCDF | 93 | 93 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDF | 93 | 93 | 40-135 | 3 | 20 | | | | |
| 123678-HxCDF | 95 | 93 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 94 | 92 | 40-135 | 1 | 20 | | | | |
| 234678-HxCDF | 94 | 95 | 40-135 | 4 | 20 | | | | |
| 1234678-HpCDF | 90 | 89 | 40-135 | 3 | 20 | | | | |
| 1234789-HpCDF | 91 | 90 | 40-135 | 3 | 20 | | | | |
| OCDF | 90 | 91 | 40-135 | 3 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8a SVOCs by EPA 8270D
Batch number: 14154SLH026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7483433 | 77 | 85 | 85 | 80 | 85 | 96 |
| 7483434 | 75 | 83 | 86 | 76 | 83 | 89 |
| 7483438 | 80 | 89 | 89 | 85 | 91 | 97 |
| 7483439 | 81 | 90 | 91 | 84 | 90 | 97 |
| 7483441 | 79 | 87 | 89 | 81 | 87 | 94 |
| 7483442 | 85 | 93 | 94 | 86 | 92 | 100 |
| 7483443 | 81 | 88 | 89 | 82 | 89 | 96 |
| Blank | 86 | 95 | 107 | 90 | 95 | 110 |
| LCS | 91 | 97 | 93 | 83 | 87 | 96 |
| LCSD | 94 | 99 | 96 | 85 | 90 | 99 |
| MS | 80 | 89 | 89 | 85 | 91 | 97 |
| MSD | 81 | 90 | 91 | 84 | 90 | 97 |
| Limits: | 25-120 | 25-130 | 35-130 | 40-130 | 45-130 | 45-130 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14154SLI026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7483433 | 91 | 101 | 85 |
| 7483434 | 111 | 119* | 97 |
| 7483438 | 95 | 109 | 86 |
| 7483439 | 96 | 111 | 88 |
| 7483441 | 84 | 96 | 79 |
| 7483442 | 83 | 90 | 74 |
| 7483443 | 85 | 98 | 80 |
| Blank | 89 | 99 | 77 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| LCS | 102 | 117 | 92 |
| MS | 95 | 109 | 86 |
| MSD | 96 | 111 | 88 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14150B94A

| | Trifluorotoluene-F |
|---|---|
| 7483444 | 84 |
| Blank | 81 |
| LCS | 91 |
| LCSD | 85 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14154A16A

| | Trifluorotoluene-F |
|---|---|
| 7483434 | 89 |
| 7483438 | 83 |
| 7483439 | 87 |
| 7483441 | 90 |
| 7483442 | 81 |
| 7483443 | 89 |
| Blank | 90 |
| LCS | 96 |
| MS | 83 |
| MSD | 87 |
| Limits: | 50-142 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141530004A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7483433 | 86 | 87 |
| 7483434 | 93 | 99 |
| 7483438 | 94 | 102 |
| 7483439 | 85 | 92 |
| 7483441 | 90 | 97 |
| 7483442 | 91 | 100 |
| 7483443 | 88 | 94 |
| Blank | 90 | 100 |
| LCS | 92 | 105 |
| MS | 94 | 102 |
| MSD | 85 | 92 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 141540008A

| | 2,4-Dichlorophenylacetic acid |
|---|---|

*- Outside of specification
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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7483433 | 77 | |
| 7483434 | 80 | |
| 7483438 | 93 | |
| 7483439 | 103 | |
| 7483441 | 74 | |
| 7483442 | 84 | |
| 7483443 | 78 | |
| Blank | 88 | |
| LCS | 103 | |
| MS | 93 | |
| MSD | 103 | |
| Limits: | 50-150 | |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141540027A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7483433 | 108 | 101 |
| 7483434 | 117 | 110 |
| 7483438 | 121* | 116 |
| 7483439 | 116 | 110 |
| 7483441 | 118 | 109 |
| 7483442 | 113 | 106 |
| 7483443 | 116 | 108 |
| Blank | 116 | 110 |
| LCS | 122* | 116 |
| LCSD | 124* | 121* |
| MS | 121* | 116 |
| MSD | 116 | 110 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 24a Energetics by 8330A
Batch number: 141550001A

| | 2-Nitro-m-xylene |
|---|---|
| 7483433 | 130 |
| 7483434 | 122 |
| 7483438 | 106 |
| 7483439 | 104 |
| 7483441 | 126 |
| 7483442 | 117 |
| 7483443 | 119 |
| Blank | 112 |
| LCS | 113 |
| LCSD | 118 |
| MS | 106 |
| MSD | 104 |
| Limits: | 80-146 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141540029A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7483433 | 86 | 92 |
| 7483434 | 93 | 95 |
| 7483438 | 78 | 94 |
| 7483439 | 77 | 92 |
| 7483441 | 77 | 92 |
| 7483442 | 80 | 94 |
| 7483443 | 68 | 83 |
| Blank | 78 | 94 |
| LCS | 108 | 111 |
| MS | 78 | 94 |
| MSD | 77 | 92 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141540030A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7483433 | 67 | 80 |
| 7483434 | 69 | 82 |
| 7483438 | 69 | 84 |
| 7483439 | 73 | 82 |
| 7483441 | 71 | 81 |
| 7483442 | 74 | 85 |
| 7483443 | 63 | 66 |
| Blank | 76 | 85 |
| LCS | 73 | 84 |
| MS | 69 | 84 |
| MSD | 73 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 26a Glycols by EPA 8015C
Batch number: 141550013A

| | Tetramethylene glycol |
|---|---|
| 7483433 | 85 |
| 7483434 | 92 |
| 7483438 | 92 |
| 7483439 | 96 |
| 7483441 | 85 |
| 7483442 | 92 |
| 7483443 | 87 |
| Blank | 80 |
| LCS | 102 |
| MS | 92 |
| MSD | 96 |
| Limits: | 75-116 |

Analysis Name: 27a Terphenyls by 8015B
Batch number: 141560017A

| | n-Triacontane-d62 |
|---|---|
| 7483433 | 102 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Surrogate Quality Control

| | |
|---|---|
| 7483434 | 104 |
| 7483438 | 99 |
| 7483439 | 108 |
| 7483441 | 96 |
| 7483442 | 96 |
| 7483443 | 105 |
| Blank | 102 |
| LCS | 106 |
| MS | 99 |
| MSD | 108 |
| Limits: | 19-152 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14160002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7483433 | 80 | 85 | 77 | 80 | 82 | 73 |
| 7483434 | 101 | 104 | 95 | 93 | 98 | 90 |
| 7483438 | 81 | 96 | 88 | 88 | 91 | 86 |
| 7483439 | 85 | 96 | 93 | 93 | 97 | 91 |
| 7483441 | 70 | 75 | 70 | 71 | 73 | 67 |
| 7483442 | 73 | 76 | 73 | 73 | 72 | 71 |
| 7483443 | 80 | 85 | 86 | 86 | 92 | 86 |
| Blank | 87 | 89 | 86 | 90 | 88 | 85 |
| MS | 81 | 96 | 88 | 88 | 91 | 86 |
| MSD | 85 | 96 | 93 | 93 | 97 | 91 |
| OPR | 78 | 90 | 86 | 85 | 86 | 81 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7483433 | 65 | 80 | 89 | 83 | 69 | 81 |
| 7483434 | 77 | 99 | 112 | 106 | 88 | 96 |
| 7483438 | 79 | 81 | 97 | 95 | 79 | 88 |
| 7483439 | 85 | 86 | 99 | 95 | 82 | 92 |
| 7483441 | 59 | 67 | 79 | 72 | 61 | 72 |
| 7483442 | 67 | 65 | 81 | 75 | 64 | 73 |
| 7483443 | 79 | 77 | 93 | 88 | 78 | 86 |
| Blank | 76 | 90 | 102 | 96 | 89 | 98 |
| MS | 79 | 81 | 97 | 95 | 79 | 88 |
| MSD | 85 | 86 | 99 | 95 | 82 | 92 |
| OPR | 72 | 80 | 99 | 95 | 85 | 92 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7483433 | 73 | 67 | 86 | 56 | 49 |
| 7483434 | 92 | 86 | 99 | 71 | 55 |
| 7483438 | 83 | 80 | 100 | 73 | 64 |
| 7483439 | 85 | 83 | 107 | 75 | 67 |
| 7483441 | 65 | 62 | 81 | 51 | 42 |
| 7483442 | 67 | 63 | 88 | 57 | 51 |
| 7483443 | 82 | 83 | 101 | 71 | 65 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478425
Reported: 07/07/14 at 12:03 PM

## Surrogate Quality Control

| | | | | | |
|---|---|---|---|---|---|
| Blank | 94 | 99 | 106 | 80 | 70 |
| MS | 83 | 80 | 100 | 73 | 64 |
| MSD | 85 | 83 | 107 | 75 | 67 |
| OPR | 88 | 83 | 103 | 74 | 64 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 5/30/2014
CarrierName: FedEx
AirbillNo: 770151717677

A-13013
G-1478425
S-7483433-44

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140530-05
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | ~~Perchlorate 314.0/331~~ | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-651-SA5C-TR-0.5 | 5/30/14 08:18 | SO | None | 2 - 16 oz glass | 10 day | X | X | | X | | X | | X | X | X | | X | X | | X | X | X | | | | X | X | | X | | | | | | | | | | Perchlorate by EPA 314 was removed per TB. NM 6/4/14 |
| SL-651-SA5C-TR-5.0MS | 5/30/14 08:40 | SO | None | 6 - 16 oz glass | 10 day | X | X | | X | | X | | X | X | X | | X | X | | X | X | X | | | | X | X | | X | | | | | | | | | | |
| SL-651-SA5C-TR-5.0MS | 5/30/14 08:40 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-951-SA5C-TR-5.0 | 5/30/14 08:45 | SO | None | 2 - 16 oz glass | 10 day | X | X | | X | | X | | X | X | X | | X | X | | X | X | X | | | | X | X | | X | | | | | | | | | | |
| SL-951-SA5C-TR-5.0 | 5/30/14 08:45 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-651-SA5C-TR-10.0 | 5/30/14 09:22 | SO | None | 2 - 16 oz glass | 10 day | X | X | | X | | X | | X | X | X | | X | X | | X | X | X | | | | X | X | | X | | | | | | | | | | |
| SL-651-SA5C-TR-10.0 | 5/30/14 09:22 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| SL-651-SA5C-TR-15.0 | 5/30/14 11:14 | SO | None | 2 - 16 oz glass | 10 day | X | X | | X | | X | | X | X | X | | X | X | | X | X | X | | | | X | X | | X | | | | | | | | | | |
| SL-651-SA5C-TR-15.0 | 5/30/14 11:14 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| TB3-053014 | 5/30/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel clean up required on half the extract. Analyze both extracts for EFH. For SVOC, biphenyls only.

**Sampler:** Ron Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 05/30/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 5/31/14 | 1020 |

TRENCHING

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16101

Group Number(s): 1478425

Client: CDM

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 05/31/2014 10:20 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | N/A |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Katherine Metzger (2241) at 13:48 on 05/31/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 2.1 | DT | Wet | Y | Bagged | N | N |
| 2 | DT131 | 3.4 | DT | Wet | Y | Bagged | N | N |
| 3 | DT131 | 3.7 | DT | Wet | Y | Bagged | N | N |

General Comments: SL-651-SA5C-TR-0.5 - 1 broken 16 oz jar - not salvagable
SL-651-SA5C-TR-5.0-MS & SL-651-SA5C-TR-15.0 - 1 broken 16 oz jar - salvagable
SL-951-SA5C-TR-5.0 - 2 broken 16 oz jars - salvagable



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.cor

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 10, 2014

Project: SSFL Phase 3 Sampling

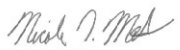
Submittal Date: 06/03/2014
Group Number: 1478735
SDG: PH211
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-563-SA5C-SB-1.0-1.5 Soil | 7484900 |
| TB3-060214 Water | 7484901 |
| SVL-518-SA5C-SB-11.0-11.5 Soil | 7484902 |
| SVL-518-SA5C-SB-5.5-6.0 Soil | 7484903 |
| SVL-576-SA5B-SB-4.0-4.3 Soil | 7484904 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SVL-563-SA5C-SB-1.0-1.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484900**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 08:40 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56310 SDG#: PH211-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.98 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.98 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.98 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.98 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.98 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.98 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.98 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-563-SA5C-SB-1.0-1.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484900**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 08:40 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56310 SDG#: PH211-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.98 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.98 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.98 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.98 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.98 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 7.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 20:45 | Andrea E Lando | 0.98 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-563-SA5C-SB-1.0-1.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484900**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 08:40 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56310 SDG#: PH211-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:25 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401A | 06/06/2014 20:26 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB3-060214 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7484901**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 08:00

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB362 SDG#: PH211-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB3-060214 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7484901**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 08:00

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB362 SDG#: PH211-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141551AA | 06/04/2014 13:11 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141551AA | 06/04/2014 13:11 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-518-SA5C-SB-11.0-11.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7484902**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51811 SDG#: PH211-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.98 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.98 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.98 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.98 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 21 | 0.98 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.98 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-518-SA5C-SB-11.0-11.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484902**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51811 SDG#: PH211-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.98 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.98 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.98 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.98 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 21:08 | Andrea E Lando | 0.98 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-518-SA5C-SB-11.0-11.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484902**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51811 SDG#: PH211-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:29 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401A | 06/06/2014 20:26 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-518-SA5C-SB-5.5-6.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484903**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:40 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51855 SDG#: PH211-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 0.95 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 0.95 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 0.95 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.95 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.95 |
| 10237 | t-Butyl alcohol | 75-65-0 | 55 | U | 55 | 22 | 0.95 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.95 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.95 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.95 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.95 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-518-SA5C-SB-5.5-6.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484903**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:40 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51855 SDG#: PH211-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.95 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.95 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.95 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.95 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.95 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.95 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.95 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.95 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.95 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.95 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.95 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 13.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 21:30 | Andrea E Lando | 0.95 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-518-SA5C-SB-5.5-6.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7484903**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:40 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

51855 SDG#: PH211-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:23 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401A | 06/06/2014 20:26 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-576-SA5B-SB-4.0-4.3 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7484904**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 12:35 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57640 SDG#: PH211-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 1.01 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 1.01 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 1.01 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.01 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.01 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 1.01 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.01 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.01 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-576-SA5B-SB-4.0-4.3 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7484904**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 12:35 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57640 SDG#: PH211-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.01 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.01 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.01 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.01 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.01 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.01 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 21:53 | Andrea E Lando | 1.01 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-576-SA5B-SB-4.0-4.3 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7484904**
**LL Group # 1478735**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 12:35 by RE

Submitted: 06/03/2014 09:20
Reported: 06/10/2014 18:25

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57640 SDG#: PH211-05*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415434683 | 06/03/2014 11:30 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415434683 | 06/03/2014 11:27 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401A | 06/06/2014 20:26 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478735
Reported: 06/10/14 at 06:25 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141562AA | Sample number(s): 7484900,7484902-7484904 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 99 | 100 | 41-149 | 1 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 81 | 94 | 50-137 | 15 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 96 | 91 | 58-123 | 6 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 97 | 99 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 102 | 100 | 80-120 | 2 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 2 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 106 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 75-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 101 | 102 | 70-126 | 1 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 100 | 94 | 32-162 | 5 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 92 | 93 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 100 | 107 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 72-120 | 0 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 104 | 101 | 69-120 | 3 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 75-120 | 0 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 104 | 96 | 63-128 | 8 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 104 | 102 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | 105 | 80-120 | 3 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 95 | 89 | 17-171 | 6 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 83 | 85 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 70-130 | 1 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 93 | 90 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 104 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 101 | 105 | 79-120 | 3 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 81 | 79 | 22-131 | 2 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 93 | 97 | 50-132 | 4 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 103 | 106 | 77-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 75-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 103 | 103 | 80-120 | 0 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 26-137 | 3 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 98 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 106 | 108 | 66-136 | 2 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 102 | 73-129 | 8 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 103 | 79-120 | 8 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 98 | 98 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 101 | 73-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478735
Reported: 06/10/14 at 06:25 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 103 | 104 | 77-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 96 | 74-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 101 | 100 | 69-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 95 | 98 | 59-134 | 3 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 2 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 102 | 95 | 64-137 | 7 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 96 | 100 | 46-130 | 5 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 90 | 91 | 40-129 | 1 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 68-128 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 98 | 101 | 69-120 | 3 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 110 | 105 | 72-130 | 5 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 104 | 101 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 92 | 93 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 115 | 103 | 80-124 | 11 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 105 | 104 | 76-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 102 | 71-123 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 117 | 119 | 78-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 64-120 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | 99 | 68-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 103 | 100 | 63-135 | 3 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | 104 | 80-120 | 3 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | 93 | 58-133 | 3 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 105 | 110 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 79-120 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 113 | 116 | 40-127 | 2 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 97 | 93 | 59-120 | 4 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 0 | 30 |
| Batch number: Y141551AA | Sample number(s): 7484901 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 89 | 88 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 76 | 76 | 52-129 | 1 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 94 | 94 | 62-120 | 0 | 30 |
| t-Amyl methyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 75-120 | 2 | 30 |
| Benzene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 78-120 | 2 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 95 | 97 | 80-120 | 3 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 95 | 96 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 73-120 | 1 | 30 |
| Bromoform | 4 | U | 4. | 0.5 | ug/l | 89 | 87 | 61-120 | 2 | 30 |
| Bromomethane | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 54-133 | 2 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 96 | 95 | 75-120 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 88 | 90 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 91 | 93 | 73-120 | 2 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 89 | 89 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 | U | 1. | 0.5 | ug/l | 101 | 104 | 74-130 | 2 | 30 |
| Chlorobenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 80-120 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478735
Reported: 06/10/14 at 06:25 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 1 | U | 1. | 0.5 | ug/l | 90 | 93 | 56-120 | 3 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 101 | 103 | 54-126 | 2 | 30 |
| Chloroform | 1 | U | 1. | 0.5 | ug/l | 98 | 100 | 80-122 | 3 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 96 | 99 | 80-120 | 3 | 30 |
| Chloromethane | 1 | U | 1. | 0.5 | ug/l | 103 | 106 | 63-120 | 3 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 90 | 93 | 80-120 | 3 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 89 | 93 | 80-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 71 | 69 | 47-120 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 85 | 85 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 | U | 1. | 0.5 | ug/l | 95 | 94 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 | U | 1. | 0.5 | ug/l | 97 | 97 | 76-120 | 0 | 30 |
| Dibromomethane | 1 | U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 92 | 95 | 80-120 | 3 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 48-132 | 3 | 30 |
| 1,1-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 94 | 80-120 | 3 | 30 |
| 1,2-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 65-135 | 1 | 30 |
| 1,1-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 109 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |
| trans-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 108 | 113 | 80-120 | 4 | 30 |
| 1,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 87 | 91 | 80-120 | 4 | 30 |
| 1,3-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 90 | 90 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 99 | 99 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 98 | 102 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 91 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 91 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 91 | 93 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 97 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 104 | 101 | 46-152 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 89 | 92 | 51-125 | 3 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 84 | 86 | 44-126 | 2 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 89 | 92 | 65-120 | 3 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 95 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 89 | 92 | 80-120 | 3 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 108 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 104 | 105 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 86 | 88 | 51-124 | 3 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 106 | 107 | 80-120 | 0 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 90 | 92 | 80-120 | 3 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 86 | 87 | 70-120 | 2 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 101 | 80-120 | 1 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 91 | 91 | 58-126 | 0 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 66-126 | 3 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 92 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 102 | 102 | 65-130 | 0 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 91 | 94 | 76-120 | 3 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 74-120 | 3 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 74 | 73 | 56-135 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478735
Reported: 06/10/14 at 06:25 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 63-120 | 1 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 93 | 94 | 80-120 | 2 | 30 |
| Batch number: 14157162401A | Sample number(s): 7484900,7484902-7484904 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14157162401A | Sample number(s): 7484900,7484902-7484904 | | | | | BKG: 7484903 | | | |
| 14a Moisture Content by 160.3 | | | | | | 13.2 | 12.4 | 6 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141562AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7484900 | 101 | 99 | 100 | 92 |
| 7484902 | 102 | 100 | 100 | 95 |
| 7484903 | 102 | 94 | 99 | 93 |
| 7484904 | 102 | 98 | 102 | 92 |
| Blank | 102 | 104 | 100 | 95 |
| LCS | 102 | 104 | 104 | 100 |
| LCSD | 101 | 100 | 103 | 101 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141551AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7484901 | 102 | 100 | 96 | 94 |
| Blank | 101 | 100 | 96 | 95 |
| LCS | 101 | 98 | 98 | 99 |
| LCSD | 100 | 101 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/2/2014
CarrierName: FedEx
AirbillNo: 770169300503

A-13013
G-1478735
S-7484900-04

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140602-04
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-563-SA5C-SB-1.0-1.5 | 6/2/14 08:40 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-563-SA5C-SB-1.0-1.5 | 6/2/14 08:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| TB3-060214 | 6/2/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-518-SA5C-SB-11.0-11.5 | 6/2/14 10:45 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-518-SA5C-SB-11.0-11.5 | 6/2/14 10:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-518-SA5C-SB-5.5-6.0 | 6/2/14 10:40 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-518-SA5C-SB-5.5-6.0 | 6/2/14 10:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-576-SA5B-SB-4.0-4.3 | 6/2/14 12:35 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-576-SA5B-SB-4.0-4.3 | 6/2/14 12:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Va Vanthasia Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steve Myrel | 06/02/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | CEsth | 6/3/14 | 0920 |

Soil Vapor Sampling 1 of 1

COC Rev 4

COC: 20140602-04, Page 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16210

Group Number(s): 1478735

Client: CDM SMITH

## SSFL PHASE 3

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/03/2014 9:20 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Corey Eshleman (3647) at 10:15 on 06/03/2014

### Samples Chilled Details: SSFL PHASE 3

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 1.1 | DT | Wet | Y | Bagged | N | N |
| 2 | DT121 | 2.0 | DT | Wet | Y | Bagged | N | N |
| 3 | DT121 | 1.4 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/03/2014
Group Number: 1478782
SDG: PH212
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SL-653-SA5C-TR-0.5 Soil | 7485078 |
| SL-653-SA5C-TR-5.0 Soil | 7485079 |
| SL-653-SA5C-TR-10.0 Soil | 7485080 |
| SL-653-SA5C-TR-15.0 Soil | 7485081 |
| TB4-060214 Water | 7485082 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 510 | U | 510 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,400 | U | 3,400 | 710 | | 1 |
| 10726 | Benzo(a)pyrene | 50-32-8 | 4 | J | 17 | 3 | | 1 |
| 10726 | Benzo(b)fluoranthene | 205-99-2 | 5 | J | 17 | 3 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 510 | U | 510 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 510 | U | 510 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Carbazole | 86-74-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 34 | U | 34 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 34 | U | 34 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 340 | U | 340 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 34 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 510 | U | 510 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,000 | U | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 17 | U | 17 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 510 | U | 510 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 34 | | 1 |
| 10726 | Isophorone | 78-59-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 34 | U | 34 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 34 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 68 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 68 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 34 | U | 34 | 17 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | 2-Nitrophenol | 88-75-5 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 510 | U | 510 | 170 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 34 | U | 34 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 170 | U | 170 | 34 | | 1 |
| 10726 | Phenol | 108-95-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 68 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 34 | U | 34 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 0.71 | J | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.5 | J | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.3 | J | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.5 | | 1.7 | 0.68 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.74 | J | 1.7 | 0.68 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.8 | | 1.7 | 0.68 | | 1 |
| 12969 | Pyrene | 129-00-0 | 2.4 | | 1.7 | 0.68 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram. | | | | | | | |
| **Explosives** | **SW-846 8330** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 150 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 410 | U | 410 | 200 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 410 | U | 410 | 200 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 410 | U | 410 | 200 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,000 | U | 2,000 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 200 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 200 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,000 | U | 2,000 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 130 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 92 | U | 92 | 45 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 19 | | 17 | 6.3 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.2 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | | 1 |

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**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.77 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.1 | U | 5.1 | 2.1 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | | 1 |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | mg/kg | | mg/kg | mg/kg | mg/kg | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.1 | | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-653-SA5C-TR-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.1 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.17 | U | 0.17 | 0.068 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.17 | U | 0.17 | 0.068 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.17 | U | 0.17 | 0.068 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,600 | | 40.4 | 7.28 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.04 | U | 4.04 | 0.748 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.24 | J | 4.04 | 0.707 | | 1 |
| 06946 | Barium | 7440-39-3 | 84.2 | | 1.01 | 0.0333 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.568 | J | 1.01 | 0.0677 | | 1 |
| 07914 | Boron | 7440-42-8 | 6.14 | J | 10.1 | 0.849 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.191 | J | 1.01 | 0.0768 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,760 | | 20.2 | 3.37 | | 1 |
| 06951 | Chromium | 7440-47-3 | 17.0 | | 3.03 | 0.162 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.93 | | 1.01 | 0.100 | | 1 |
| 06953 | Copper | 7440-50-8 | 7.61 | | 2.02 | 0.293 | | 1 |
| 01654 | Iron | 7439-89-6 | 20,400 | | 40.4 | 3.66 | | 1 |
| 06955 | Lead | 7439-92-1 | 4.91 | | 3.03 | 0.505 | | 1 |
| 01656 | Lithium | 7439-93-2 | 24.3 | | 4.0 | 0.34 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,940 | | 10.1 | 1.69 | | 1 |
| 06958 | Manganese | 7439-96-5 | 274 | | 1.01 | 0.0839 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.223 | J | 2.02 | 0.172 | | 1 |
| 06961 | Nickel | 7440-02-0 | 9.96 | | 2.02 | 0.131 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 463 | | 10.1 | 2.92 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,400 | | 101 | 8.43 | | 1 |
| 01667 | Sodium | 7440-23-5 | 67.8 | J | 101 | 16.9 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.67 | J | 10.1 | 0.222 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,150 | | 1.01 | 0.172 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06971 | Vanadium | 7440-62-2 | 34.2 | | 1.01 | 0.131 | | 1 |
| 06972 | Zinc | 7440-66-6 | 58.0 | | 4.04 | 0.202 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.61 | J | 5.05 | 0.849 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.305 | J | 0.404 | 0.101 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.202 | U | 0.202 | 0.0263 | | 2 |
| 06144 | Strontium | 7440-24-6 | 15.8 | | 0.404 | 0.0687 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.277 | | 0.202 | 0.0303 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0160 | U | 0.0160 | 0.0096 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.38 | J | 0.42 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.79 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.5 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-653-SA5C-TR-0.5 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.974 | U | 0.974 | 0.144 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.87 | U | 4.87 | 0.0922 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0493 | JBQ | 4.87 | 0.0443 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0720 | JBQ | 4.87 | 0.0453 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0806 | JQ | 4.87 | 0.0467 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.12 | JB | 4.87 | 0.0527 | | 1 |
| 11031 | OCDD | 3268-87-9 | 10.2 | B | 9.74 | 0.0370 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0958 | JQ | 0.974 | 0.0919 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0676 | JBQ | 4.87 | 0.0318 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 4.87 | U | 4.87 | 0.0339 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0803 | JBQ | 4.87 | 0.0406 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0430 | JQ | 4.87 | 0.0360 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 4.87 | U | 4.87 | 0.0390 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0708 | JQ | 4.87 | 0.0356 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.260 | JB | 4.87 | 0.0173 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0620 | JBQ | 4.87 | 0.0273 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.399 | JBQ | 9.74 | 0.0616 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0168 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 69 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 89 | 32 - 141 |
| 13C12-123678-HxCDD | 89 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 93 | 23 - 140 |
| 13C12-OCDD | 102 | 17 - 157 |
| 13C12-2378-TCDF | 72 | 24 - 169 |
| 13C12-12378-PeCDF | 93 | 24 - 185 |
| 13C12-23478-PeCDF | 81 | 21 - 178 |
| 13C12-123478-HxCDF | 82 | 26 - 152 |
| 13C12-123678-HxCDF | 89 | 26 - 123 |
| 13C12-234678-HxCDF | 87 | 28 - 136 |
| 13C12-123789-HxCDF | 89 | 29 - 147 |
| 13C12-1234678-HpCDF | 110 | 28 - 143 |
| 13C12-1234789-HpCDF | 80 | 26 - 138 |
| 13C12-OCDF | 82 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 08:38 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 08:24 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10132 | 24a Energetics by 8330A | SW-846 8330 | 1 | 141550001A | 06/06/2014 23:47 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 01:17 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 20:25 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 17:43 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 04:15 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141550013A | 06/06/2014 22:15 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 17:18 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 20:41 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 01:28 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14161001 | 06/11/2014 20:58 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14161001 | 06/10/2014 09:30 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485078**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR05- SDG#: PH212-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:04 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 07:49 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:49 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:49 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:49 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 08:43 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 14155243201A | 06/05/2014 19:31 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14154039403A | 06/03/2014 21:10 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401B | 06/06/2014 20:26 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 510 | U | 510 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,400 | U | 3,400 | 720 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 510 | U | 510 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 510 | U | 510 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Carbazole | 86-74-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 34 | U | 34 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 34 | U | 34 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 340 | U | 340 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 34 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 510 | U | 510 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,000 | U | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 17 | U | 17 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 510 | U | 510 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 34 | | 1 |
| 10726 | Isophorone | 78-59-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 34 | U | 34 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 34 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 69 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 69 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 510 | U | 510 | 170 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 34 | U | 34 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 170 | U | 170 | 34 | | 1 |
| 10726 | Phenol | 108-95-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 69 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 34 | U | 34 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | | 25.2 |
| **Explosives** | **SW-846 8330** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 150 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 130 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 92 | U | 92 | 45 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 17 | U | 17 | 6.4 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.2 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | | 1 |

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**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.77 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.1 | U | 5.1 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | mg/kg | | mg/kg | mg/kg | mg/kg | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-653-SA5C-TR-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.1 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.17 | U | 0.17 | 0.069 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.17 | U | 0.17 | 0.069 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.17 | U | 0.17 | 0.069 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,800 | | 41.1 | 7.41 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.11 | U | 4.11 | 0.761 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.11 | J | 4.11 | 0.719 | | 1 |
| 06946 | Barium | 7440-39-3 | 73.4 | | 1.03 | 0.0339 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.529 | J | 1.03 | 0.0689 | | 1 |
| 07914 | Boron | 7440-42-8 | 7.53 | J | 10.3 | 0.863 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.170 | J | 1.03 | 0.0781 | | 1 |
| 01650 | Calcium | 7440-70-2 | 1,880 | | 20.6 | 3.43 | | 1 |
| 06951 | Chromium | 7440-47-3 | 12.8 | | 3.08 | 0.164 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.11 | | 1.03 | 0.102 | | 1 |
| 06953 | Copper | 7440-50-8 | 5.23 | | 2.06 | 0.298 | | 1 |
| 01654 | Iron | 7439-89-6 | 16,900 | | 41.1 | 3.72 | | 1 |
| 06955 | Lead | 7439-92-1 | 4.28 | | 3.08 | 0.514 | | 1 |
| 01656 | Lithium | 7439-93-2 | 21.1 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,640 | | 10.3 | 1.72 | | 1 |
| 06958 | Manganese | 7439-96-5 | 235 | | 1.03 | 0.0853 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.192 | J | 2.06 | 0.175 | | 1 |
| 06961 | Nickel | 7440-02-0 | 6.90 | | 2.06 | 0.134 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 262 | | 10.3 | 2.97 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,730 | | 103 | 8.57 | | 1 |

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**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01667 | Sodium | 7440-23-5 | 68.6 | J | 103 | 17.2 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.78 | J | 10.3 | 0.226 | | 1 |
| 06970 | Titanium | 7440-32-6 | 950 | | 1.03 | 0.175 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 27.8 | | 1.03 | 0.134 | | 1 |
| 06972 | Zinc | 7440-66-6 | 51.0 | | 4.11 | 0.206 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.41 | J | 5.14 | 0.863 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.262 | J | 0.411 | 0.103 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.206 | U | 0.206 | 0.0267 | | 2 |
| 06144 | Strontium | 7440-24-6 | 16.6 | | 0.411 | 0.0699 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.270 | | 0.206 | 0.0308 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0163 | U | 0.0163 | 0.0098 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.42 | U | 0.42 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.92 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.7 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.7 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.260 | JQ | 1.00 | 0.146 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.112 | JQ | 5.01 | 0.0970 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.01 | U | 5.01 | 0.0393 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 5.01 | U | 5.01 | 0.0414 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.104 | JQ | 5.01 | 0.0414 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.201 | JB | 5.01 | 0.0510 | | 1 |
| 11031 | OCDD | 3268-87-9 | 3.06 | JB | 10.0 | 0.0406 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.00 | U | 1.00 | 0.112 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0554 | JBQ | 5.01 | 0.0425 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0578 | JBQ | 5.01 | 0.0426 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.124 | JBQ | 5.01 | 0.0439 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.01 | U | 5.01 | 0.0388 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0844 | JBQ | 5.01 | 0.0386 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.01 | U | 5.01 | 0.0380 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0653 | JB | 5.01 | 0.0147 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0609 | JBQ | 5.01 | 0.0282 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.355 | JBQ | 10.0 | 0.0761 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.00358 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 65 | 25 - 164 |
| 13C12-12378-PeCDD | 72 | 25 - 181 |
| 13C12-123478-HxCDD | 83 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 81 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 92 | 17 - 157 |
| 13C12-2378-TCDF | 60 | 24 - 169 |
| 13C12-12378-PeCDF | 79 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 69 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 74 | 28 - 136 |
| 13C12-123789-HxCDF | 81 | 29 - 147 |
| 13C12-1234678-HpCDF | 104 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 65 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 09:04 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 08:57 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 16:25 | Laura M Krieger | 25.2 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415434686 | 06/03/2014 13:07 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415434686 | 06/03/2014 13:08 | Larry E Bevins | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330 | 1 | 141550001A | 06/07/2014 00:30 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 02:38 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 20:38 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 18:24 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 04:33 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141550013A | 06/06/2014 22:30 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 17:40 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 21:03 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 01:49 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485079**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:45 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR50- SDG#: PH212-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14161001 | 06/11/2014 21:54 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14161001 | 06/10/2014 09:30 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:08 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 07:51 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:51 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:51 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:51 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 08:45 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 19:38 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14154039403A | 06/03/2014 21:10 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401B | 06/06/2014 20:26 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,500 | U | 3,500 | 730 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 520 | U | 520 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 35 | U | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 520 | U | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,000 | U | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 520 | U | 520 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 70 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 520 | U | 520 | 170 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 70 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | | 23.67 |
| **Explosives** | **SW-846 8330** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 3,800 | U | 3,800 | 3,800 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 38 | U | 38 | 13 | | 1 |
| 10401 | Dalapon | 75-99-0 | 94 | U | 94 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.5 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 13 | U | 13 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.4 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.4 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.85 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.78 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.2 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,200 | | 40.6 | 7.32 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.06 | U | 4.06 | 0.752 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.14 | J | 4.06 | 0.711 | | 1 |
| 06946 | Barium | 7440-39-3 | 82.3 | | 1.02 | 0.0335 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.684 | J | 1.02 | 0.0680 | | 1 |
| 07914 | Boron | 7440-42-8 | 7.17 | J | 10.2 | 0.853 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.183 | J | 1.02 | 0.0772 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,250 | | 20.3 | 3.39 | | 1 |
| 06951 | Chromium | 7440-47-3 | 15.7 | | 3.05 | 0.162 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.77 | | 1.02 | 0.101 | | 1 |
| 06953 | Copper | 7440-50-8 | 5.66 | | 2.03 | 0.295 | | 1 |
| 01654 | Iron | 7439-89-6 | 19,600 | | 40.6 | 3.68 | | 1 |
| 06955 | Lead | 7439-92-1 | 5.12 | | 3.05 | 0.508 | | 1 |
| 01656 | Lithium | 7439-93-2 | 21.4 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,730 | | 10.2 | 1.70 | | 1 |
| 06958 | Manganese | 7439-96-5 | 210 | | 1.02 | 0.0843 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.186 | J | 2.03 | 0.173 | | 1 |
| 06961 | Nickel | 7440-02-0 | 8.57 | | 2.03 | 0.132 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 157 | | 10.2 | 2.93 | | 1 |
| 01662 | Potassium | 7440-09-7 | 1,750 | | 102 | 8.47 | | 1 |

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**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01667 | Sodium | 7440-23-5 | 138 | | 102 | 17.0 | | 1 |
| 06969 | Tin | 7440-31-5 | 2.77 | J | 10.2 | 0.223 | | 1 |
| 06970 | Titanium | 7440-32-6 | 969 | | 1.02 | 0.173 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 34.1 | | 1.02 | 0.132 | | 1 |
| 06972 | Zinc | 7440-66-6 | 40.7 | | 4.06 | 0.203 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.28 | J | 5.08 | 0.853 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.229 | J | 0.406 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0305 | J | 0.203 | 0.0264 | | 2 |
| 06144 | Strontium | 7440-24-6 | 19.6 | | 0.406 | 0.0691 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.233 | | 0.203 | 0.0305 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0169 | U | 0.0169 | 0.0101 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.43 | U | 0.43 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 23 C. | n.a. | 8.15 | | 0.0100 | 0.0100 | | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.4 | | 0.10 | 0.10 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.145 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.07 | U | 5.07 | 0.0832 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.07 | U | 5.07 | 0.0462 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0825 | JBQ | 5.07 | 0.0481 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0529 | JQ | 5.07 | 0.0468 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.0801 | JBQ | 5.07 | 0.0447 | | 1 |
| 11031 | OCDD | 3268-87-9 | 0.877 | JB | 10.1 | 0.0308 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.01 | U | 1.01 | 0.0998 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0525 | JBQ | 5.07 | 0.0452 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 5.07 | U | 5.07 | 0.0433 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0475 | JBQ | 5.07 | 0.0412 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 5.07 | U | 5.07 | 0.0379 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0745 | JBQ | 5.07 | 0.0390 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 5.07 | U | 5.07 | 0.0372 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0339 | JBQ | 5.07 | 0.0114 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0442 | JBQ | 5.07 | 0.0208 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.133 | JBQ | 10.1 | 0.0761 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.000263 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 58 | 25 - 164 |
| 13C12-12378-PeCDD | 74 | 25 - 181 |
| 13C12-123478-HxCDD | 74 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 73 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 81 | 17 - 157 |
| 13C12-2378-TCDF | 58 | 24 - 169 |
| 13C12-12378-PeCDF | 73 | 24 - 185 |
| 13C12-23478-PeCDF | 69 | 21 - 178 |
| 13C12-123478-HxCDF | 67 | 26 - 152 |
| 13C12-123678-HxCDF | 76 | 26 - 123 |
| 13C12-234678-HxCDF | 71 | 28 - 136 |
| 13C12-123789-HxCDF | 73 | 29 - 147 |
| 13C12-1234678-HpCDF | 101 | 28 - 143 |
| 13C12-1234789-HpCDF | 64 | 26 - 138 |
| 13C12-OCDF | 61 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 09:31 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 09:29 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 17:02 | Laura M Krieger | 23.67 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415434686 | 06/03/2014 13:06 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415434686 | 06/03/2014 13:07 | Larry E Bevins | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330 | 1 | 141550001A | 06/07/2014 01:12 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 03:05 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 20:50 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 18:38 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 04:52 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141550013A | 06/06/2014 22:45 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 18:03 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 21:25 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 02:11 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-10.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485080**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 10:55 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR10- SDG#: PH212-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14161001 | 06/11/2014 22:51 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14161001 | 06/10/2014 09:30 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:19 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 07:58 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:58 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:58 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:58 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 08:47 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14155243201A | 06/05/2014 19:54 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14154039403A | 06/03/2014 21:10 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401B | 06/06/2014 20:26 | Scott W Freisher | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 3,400 | U | 3,400 | 720 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 520 | U | 520 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Carbazole | 86-74-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 34 | U | 34 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 34 | U | 34 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 340 | U | 340 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 34 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 520 | U | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 1,000 | U | 1,000 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 520 | U | 520 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 34 | | 1 |
| 10726 | Isophorone | 78-59-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 34 | U | 34 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 34 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 69 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 69 | | 1 |
| 10726 | Nitrobenzene | 98-95-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 520 | U | 520 | 170 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 34 | U | 34 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 34 | | 1 |
| 10726 | Phenol | 108-95-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 69 | | 1 |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 34 | U | 34 | 17 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4,6-dinitro-2-methylphenol 4-nitroaniline | | | | | | | |
| **GC/MS Semivolatiles SW-846 8270D SIM** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Chrysene | 218-01-9 | 0.62 | J | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(e)pyrene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.0 | U | 1.0 | 0.2 | | 25.3 |
| **Explosives** | **SW-846 8330** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 150 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 130 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 93 | U | 93 | 45 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 17 | U | 17 | 16 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.3 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.3 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.77 | | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.1 | J | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.2 | J | 1.7 | 0.36 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | | 1 |

For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken.

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.2 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.069 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.069 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.069 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 6.3 | | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 9.1 | J | 10 | 4.1 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,200 | | 40.9 | 7.37 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.09 | U | 4.09 | 0.756 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.32 | | 4.09 | 0.715 | | 1 |
| 06946 | Barium | 7440-39-3 | 111 | | 1.02 | 0.0337 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.696 | J | 1.02 | 0.0685 | | 1 |
| 07914 | Boron | 7440-42-8 | 8.69 | J | 10.2 | 0.858 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.302 | J | 1.02 | 0.0777 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,770 | | 20.4 | 3.41 | | 1 |
| 06951 | Chromium | 7440-47-3 | 21.0 | | 3.07 | 0.163 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.94 | | 1.02 | 0.101 | | 1 |
| 06953 | Copper | 7440-50-8 | 12.2 | | 2.04 | 0.296 | | 1 |
| 01654 | Iron | 7439-89-6 | 23,900 | | 40.9 | 3.70 | | 1 |
| 06955 | Lead | 7439-92-1 | 7.61 | | 3.07 | 0.511 | | 1 |
| 01656 | Lithium | 7439-93-2 | 25.5 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,690 | | 10.2 | 1.71 | | 1 |
| 06958 | Manganese | 7439-96-5 | 349 | | 1.02 | 0.0848 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.262 | J | 2.04 | 0.174 | | 1 |
| 06961 | Nickel | 7440-02-0 | 12.9 | | 2.04 | 0.133 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 563 | | 10.2 | 2.95 | | 1 |
| 01662 | Potassium | 7440-09-7 | 4,690 | | 102 | 8.52 | | 1 |
| 01667 | Sodium | 7440-23-5 | 167 | | 102 | 17.1 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06969 | Tin | 7440-31-5 | 2.90 | J | 10.2 | 0.225 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,070 | | 1.02 | 0.174 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 39.3 | | 1.02 | 0.133 | | 1 |
| 06972 | Zinc | 7440-66-6 | 69.7 | | 4.09 | 0.204 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.91 | J | 5.11 | 0.858 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.351 | J | 0.409 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0415 | J | 0.204 | 0.0266 | | 2 |
| 06144 | Strontium | 7440-24-6 | 26.9 | | 0.409 | 0.0695 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.388 | | 0.204 | 0.0307 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0168 | U | 0.0168 | 0.0101 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.35 | J | 0.41 | 0.14 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.04 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.8 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.1 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.984 | U | 0.984 | 0.149 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.92 | U | 4.92 | 0.0872 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 4.92 | U | 4.92 | 0.0492 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.236 | JBQ | 4.92 | 0.0531 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.289 | JQ | 4.92 | 0.0508 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.482 | JBQ | 4.92 | 0.0538 | | 1 |
| 11031 | OCDD | 3268-87-9 | 2.51 | JB | 9.84 | 0.0258 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.984 | U | 0.984 | 0.118 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.265 | JBQ | 4.92 | 0.0494 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0879 | JB | 4.92 | 0.0499 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0929 | JB | 4.92 | 0.0532 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0882 | JQ | 4.92 | 0.0460 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.681 | JBQ | 4.92 | 0.0485 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.107 | JQ | 4.92 | 0.0477 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.177 | JBQ | 4.92 | 0.0160 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 4.92 | U | 4.92 | 0.0295 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.512 | JB | 9.84 | 0.0652 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0366 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 63 | 25 - 164 |
| 13C12-12378-PeCDD | 70 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 85 | 28 - 130 |
| 13C12-123789-HxCDD | 84 | 28 - 130 |
| 13C12-1234678-HpCDD | 90 | 23 - 140 |
| 13C12-OCDD | 104 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 78 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 72 | 26 - 152 |
| 13C12-123678-HxCDF | 82 | 26 - 123 |
| 13C12-234678-HxCDF | 78 | 28 - 136 |
| 13C12-123789-HxCDF | 82 | 29 - 147 |
| 13C12-1234678-HpCDF | 116 | 28 - 143 |
| 13C12-1234789-HpCDF | 72 | 26 - 138 |
| 13C12-OCDF | 72 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
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**Project Name: SSFL Phase 3 Sampling**

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14154SLH026 | 06/13/2014 09:57 | Brian K Graham | 1 |
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14154SLI026 | 06/10/2014 10:01 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14154SLH026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14154SLI026 | 06/04/2014 09:30 | David S Schrum | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14154A16A | 06/04/2014 17:40 | Laura M Krieger | 25.3 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415434686 | 06/03/2014 13:05 | Larry E Bevins | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415434686 | 06/03/2014 13:05 | Larry E Bevins | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330 | 1 | 141550001A | 06/07/2014 03:20 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 03:31 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 21:03 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 18:51 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141540027A | 06/10/2014 05:10 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141540027A | 06/04/2014 07:40 | Olivia Arosemena | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141550002A | 06/05/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141550001A | 06/04/2014 13:15 | Wanda F Oswald | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141550013A | 06/06/2014 23:00 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141560017A | 06/06/2014 18:25 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141540029A | 06/04/2014 21:46 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141540030A | 06/06/2014 02:32 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141540030A | 06/04/2014 09:30 | David S Schrum | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141540029A | 06/04/2014 09:30 | David S Schrum | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141560017A | 06/05/2014 17:00 | JoElla L Rice | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141550013A | 06/04/2014 20:00 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-653-SA5C-TR-15.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7485081**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 09:20 by AP

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TR15- SDG#: PH212-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14161001 | 06/11/2014 23:47 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14161001 | 06/10/2014 09:30 | Robert Brown | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:23 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 08:01 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:01 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:01 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:01 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 08:49 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 14155243201A | 06/05/2014 20:33 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14154039403A | 06/03/2014 21:10 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14155243201A | 06/04/2014 21:20 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14157162401B | 06/06/2014 20:26 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: TB4-060214 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7485082**
**LL Group # 1478782**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/02/2014 08:00

Submitted: 06/03/2014 09:20
Reported: 07/07/2014 13:26

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB4-- SDG#: PH212-05TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14157A94A | 06/09/2014 | 12:43 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14157A94A | 06/09/2014 | 12:43 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14154SLH026 | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Aniline | 500 U | | 500. | 170 | ug/kg | 66 | | 43-110 | | |
| Benzidine | 3,300 U | | 3,300. | 700 | ug/kg | 33 | | 21-78 | | |
| Benzo(a)pyrene | 17 | U | 17. | 3 | ug/kg | 98 | | 84-122 | | |
| Benzo(b)fluoranthene | 17 | U | 17. | 3 | ug/kg | 83 | | 83-124 | | |
| Benzoic acid | 500 U | | 500. | 170 | ug/kg | 73 | | 41-122 | | |
| Benzyl alcohol | 500 U | | 500. | 170 | ug/kg | 103 | | 81-121 | | |
| 1,1'-Biphenyl | 33 | U | 33. | 17 | ug/kg | 85 | | 76-117 | | |
| 4-Bromophenyl-phenylether | 33 | U | 33. | 17 | ug/kg | 91 | | 84-120 | | |
| Carbazole | 33 | U | 33. | 17 | ug/kg | 88 | | 84-119 | | |
| 4-Chloro-3-methylphenol | 33 | U | 33. | 17 | ug/kg | 95 | | 86-128 | | |
| 4-Chloroaniline | 33 | U | 33. | 17 | ug/kg | 28 | | 10-105 | | |
| bis(2-Chloroethoxy)methane | 33 | U | 33. | 17 | ug/kg | 86 | | 71-121 | | |
| bis(2-Chloroethyl)ether | 33 | U | 33. | 17 | ug/kg | 88 | | 77-115 | | |
| bis(2-Chloroisopropyl)ether | 33 | U | 33. | 17 | ug/kg | 89 | | 56-129 | | |
| 2-Chloronaphthalene | 33 | U | 33. | 7 | ug/kg | 99 | | 63-146 | | |
| 2-Chlorophenol | 33 | U | 33. | 17 | ug/kg | 97 | | 80-122 | | |
| 4-Chlorophenyl-phenylether | 33 | U | 33. | 17 | ug/kg | 94 | | 83-115 | | |
| Dibenzofuran | 33 | U | 33. | 17 | ug/kg | 89 | | 85-115 | | |
| 1,2-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 93 | | 79-112 | | |
| 1,3-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 91 | | 79-113 | | |
| 1,4-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 90 | | 79-112 | | |
| 3,3'-Dichlorobenzidine | 330 U | | 330. | 100 | ug/kg | 39 | | 10-125 | | |
| 2,4-Dichlorophenol | 33 | U | 33. | 17 | ug/kg | 97 | | 81-123 | | |
| 2,6-Dichlorophenol | 33 | U | 33. | 17 | ug/kg | 96 | 95 | 77-113 | 0 | 30 |
| 2,4-Dimethylphenol | 33 | U | 33. | 17 | ug/kg | 93 | | 83-120 | | |
| 3,5-Dimethylphenol | 170 U | | 170. | 33 | ug/kg | 120 | | 70-130 | | |
| 4,6-Dinitro-2-methylphenol | 500 U | | 500. | 170 | ug/kg | 64* | | 67-131 | | |
| 2,4-Dinitrophenol | 1,000 U | | 1,000. | 300 | ug/kg | 44 | | 35-141 | | |
| 1,2-Diphenylhydrazine | 33 | U | 33. | 17 | ug/kg | 88 | | 77-111 | | |
| Hexachlorobenzene | 17 | U | 17. | 3 | ug/kg | 96 | | 80-121 | | |
| Hexachlorobutadiene | 33 | U | 33. | 17 | ug/kg | 92 | | 78-121 | | |
| Hexachlorocyclopentadiene | 500 U | | 500. | 170 | ug/kg | 91 | | 66-159 | | |
| Hexachloroethane | 170 U | | 170. | 33 | ug/kg | 88 | | 78-114 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Isophorone | 33 | U | 33. | 17 | ug/kg | 93 | | 77-119 | | |
| 2-Methylphenol | 33 | U | 33. | 17 | ug/kg | 100 | | 82-125 | | |
| 4-Methylphenol | 33 | U | 33. | 17 | ug/kg | 95 | | 78-126 | | |
| NDPA as diphenylamine | 170 | U | 170. | 33 | ug/kg | 91 | | 70-130 | | |
| 2-Nitroaniline | 33 | U | 33. | 17 | ug/kg | 94 | | 84-126 | | |
| 3-Nitroaniline | 170 | U | 170. | 67 | ug/kg | 82 | | 66-128 | | |
| 4-Nitroaniline | 170 | U | 170. | 67 | ug/kg | 56* | | 57-106 | | |
| Nitrobenzene | 33 | U | 33. | 17 | ug/kg | 88 | | 73-118 | | |
| 2-Nitrophenol | 33 | U | 33. | 17 | ug/kg | 91 | | 83-125 | | |
| 4-Nitrophenol | 500 | U | 500. | 170 | ug/kg | 78 | | 58-128 | | |
| N-Nitroso-di-n-propylamine | 33 | U | 33. | 17 | ug/kg | 88 | | 70-119 | | |
| N-Nitrosodiphenylamine | 33 | U | 33. | 17 | ug/kg | 92 | | 83-118 | | |
| Pentachlorophenol | 170 | U | 170. | 33 | ug/kg | 86 | | 57-128 | | |
| Phenol | 33 | U | 33. | 17 | ug/kg | 96 | | 76-124 | | |
| Pyridine | 170 | U | 170. | 67 | ug/kg | 75 | | 51-109 | | |
| 1,2,4-Trichlorobenzene | 33 | U | 33. | 17 | ug/kg | 92 | | 84-119 | | |
| 2,4,5-Trichlorophenol | 33 | U | 33. | 17 | ug/kg | 95 | | 86-123 | | |
| 2,4,6-Trichlorophenol | 33 | U | 33. | 17 | ug/kg | 95 | | 81-123 | | |
| Batch number: 14154SLI026 | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 86 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 77* | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 87 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 93 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 83 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 87 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 99 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 94 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 98 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 92 | | 80-119 | | |
| Batch number: 14154A16A | Sample number(s): 7485079-7485081 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14157A94A | Sample number(s): 7485082 | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 U | 50. | 20 | ug/l | 104 | 104 | 80-133 | 1 | 30 |
| Batch number: 141550001A | Sample number(s): 7485078-7485081 | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 300 U | 300. | 150 | ug/kg | 113 | | 81-133 | | |
| 2-Amino-4,6-Dinitrotoluene | 300 U | 300. | 100 | ug/kg | 102 | | 79-120 | | |
| 2,6-Diamino-4-nitrotoluene | 400 U | 400. | 200 | ug/kg | 100 | 100 | 59-133 | 0 | 30 |
| 2,4-Diamino-6-nitrotoluene | 400 U | 400. | 200 | ug/kg | 99 | 99 | 58-132 | 0 | 30 |
| 1,3-Dinitrobenzene | 300 U | 300. | 100 | ug/kg | 114 | | 94-124 | | |
| 2,4-Dinitrotoluene | 300 U | 300. | 100 | ug/kg | 111 | | 83-125 | | |
| 2,6-Dinitrotoluene | 300 U | 300. | 100 | ug/kg | 105 | | 72-137 | | |
| HMX | 400 U | 400. | 200 | ug/kg | 112 | | 65-121 | | |
| Nitrobenzene | 300 U | 300. | 100 | ug/kg | 102 | | 81-116 | | |
| Nitroglycerin | 2,000 U | 2,000. | 1,000 | ug/kg | 95 | | 70-118 | | |
| 2-Nitrotoluene | 300 U | 300. | 200 | ug/kg | 105 | | 86-113 | | |
| 3-Nitrotoluene | 300 U | 300. | 250 | ug/kg | 103 | | 85-135 | | |
| 4-Nitrotoluene | 300 U | 300. | 200 | ug/kg | 104 | | 80-122 | | |
| PETN | 2,000 U | 2,000. | 1,000 | ug/kg | 158* | | 64-121 | | |
| RDX | 300 U | 300. | 130 | ug/kg | 107 | | 84-122 | | |
| Tetryl | 300 U | 300. | 160 | ug/kg | 92 | | 67-152 | | |
| 1,3,5-Trinitrobenzene | 300 U | 300. | 100 | ug/kg | 112 | | 83-119 | | |
| 2,4,6-Trinitrotoluene | 300 U | 300. | 100 | ug/kg | 102 | | 82-133 | | |
| Batch number: 141560024A | Sample number(s): 7485078-7485081 | | | | | | | | |
| 2,4-D | 36 U | 36. | 12 | ug/kg | 129 | | 68-160 | | |
| Dalapon | 90 U | 90. | 44 | ug/kg | 75 | | 13-128 | | |
| 2,4-DB | 17 U | 17. | 6.2 | ug/kg | 129 | | 73-159 | | |
| Dicamba | 12 U | 12. | 4.0 | ug/kg | 125 | | 64-128 | | |
| Dinoseb | 24 U | 24. | 9.0 | ug/kg | 9* | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 U | 17. | 9.0 | ug/kg | 174 | | 86-178 | | |
| MCPA | 2,500 U | 2,500. | 760 | ug/kg | 102 | | 61-123 | | |
| MCPP (Mecoprop) | 2,500 U | 2,500. | 750 | ug/kg | 105 | | 59-128 | | |
| 2,4,5-T | 1.7 U | 1.7 | 0.82 | ug/kg | 139 | | 69-157 | | |
| 2,4,5-TP | 1.7 U | 1.7 | 0.75 | ug/kg | 137 | | 78-146 | | |
| Batch number: 141550002A | Sample number(s): 7485078-7485081 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 6a Perchlorate (Method 6850) | 5.0 | U | 5.0 | 2.1 | ug/kg | 102 | | 85-115 | | |
| Batch number: 141540027A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 96 | 97 | 36-106 | 1 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 116 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 125 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141580004A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 87 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 86 | | 55-135 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 93 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 92 | | 56-138 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 89 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 85 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 100 | | 59-137 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 68-134 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 77 | | 56-128 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 90 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 101 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 85 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 61-125 | | |
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 97 | | 69-126 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 76 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 96 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 88 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141550013A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 100 | | 54-149 | | |
| Ethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 98 | | 76-122 | | |
| Propylene glycol | 10 | U | 10. | 5.0 | mg/kg | 102 | | 67-131 | | |
| Triethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 100 | | 34-145 | | |
| Batch number: 141540029A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 108 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 110 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 109 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 75 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 92 | | 60-115 | | |
| Batch number: 141540030A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 79 | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 82 | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 83 | | 77-127 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 66 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 58* | | 60-115 | | |
| Batch number: 141560017A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| m-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 99 | | 64-111 | | |
| o-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 96 | | 75-125 | | |
| p-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 90 | | 69-109 | | |
| Batch number: 141610637001 | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 106 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 111 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 104 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 97 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 105 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 105 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 103 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.54 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 105 | | 80-120 | | |
| Zinc | 0.790 | J | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 104 | | 80-120 | | |
| Batch number: 141610637001A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 105 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 105 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 107 | | 80-120 | | |
| Batch number: 141610637001B | Sample number(s): 7485078-7485081 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 106 | | 80-120 | | |
| Batch number: 141610638001 | Sample number(s): 7485078-7485081 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 94 | | 85-120 | | |
| Batch number: 14155243201A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 0.40 | U | 0.40 | 0.14 | mg/kg | 89 | | 80-120 | | |
| Batch number: 14154039403A | Sample number(s): 7485078-7485081 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14157162401B | Sample number(s): 7485078-7485081 | | | | | | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14161001 | Sample number(s): 7485078-7485081 | | | | | | | | |
| 2378-TCDD | 1.00 U | 1.00 | 0.139 | ng/kg | 99 | | 67-158 | | |
| 12378-PeCDD | 5.00 U | 5.00 | 0.0810 | ng/kg | 104 | | 70-142 | | |
| 123478-HxCDD | 0.0558 J | 5.00 | 0.0458 | ng/kg | 96 | | 70-164 | | |
| 123678-HxCDD | 0.0628 J | 5.00 | 0.0467 | ng/kg | 96 | | 76-134 | | |
| 123789-HxCDD | 5.00 U | 5.00 | 0.0452 | ng/kg | 98 | | 64-162 | | |
| 1234678-HpCDD | 0.103 J | 5.00 | 0.0497 | ng/kg | 101 | | 70-140 | | |
| OCDD | 0.217 J | 10.0 | 0.0459 | ng/kg | 99 | | 78-144 | | |
| 2378-TCDF | 1.00 U | 1.00 | 0.0889 | ng/kg | 100 | | 75-158 | | |
| 12378-PeCDF | 0.143 J | 5.00 | 0.0416 | ng/kg | 94 | | 80-134 | | |
| 23478-PeCDF | 0.0760 J | 5.00 | 0.0400 | ng/kg | 99 | | 68-160 | | |
| 123478-HxCDF | 0.0578 J | 5.00 | 0.0489 | ng/kg | 97 | | 72-134 | | |
| 123678-HxCDF | 5.00 U | 5.00 | 0.0427 | ng/kg | 98 | | 84-130 | | |
| 123789-HxCDF | 0.0787 J | 5.00 | 0.0484 | ng/kg | 102 | | 78-130 | | |
| 234678-HxCDF | 5.00 U | 5.00 | 0.0442 | ng/kg | 91 | | 70-156 | | |
| 1234678-HpCDF | 0.0595 J | 5.00 | 0.0220 | ng/kg | 95 | | 82-122 | | |
| 1234789-HpCDF | 0.0431 J | 5.00 | 0.0389 | ng/kg | 100 | | 78-138 | | |
| OCDF | 0.216 J | 10.0 | 0.0990 | ng/kg | 95 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.00787 | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14154SLH026 | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| Aniline | 62 | 70 | 10-131 | 13 | 30 | | | | |
| Benzidine | 15* | 17* | 35-141 | 12 | 30 | | | | |
| Benzo(a)pyrene | 94 | 97 | 36-151 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 84 | 92 | 29-150 | 8 | 30 | | | | |
| Benzoic acid | 76 | 76 | 23-170 | 1 | 30 | | | | |
| Benzyl alcohol | 93 | 96 | 32-145 | 4 | 30 | | | | |
| 1,1'-Biphenyl | 90 | 89 | 64-120 | 0 | 30 | | | | |
| 4-Bromophenyl-phenylether | 94 | 94 | 66-122 | 0 | 30 | | | | |
| Carbazole | 86 | 86 | 63-126 | 0 | 30 | | | | |
| 4-Chloro-3-methylphenol | 85 | 87 | 61-131 | 2 | 30 | | | | |
| 4-Chloroaniline | 43 | 67 | 11-114 | 43* | 30 | | | | |
| bis(2-Chloroethoxy)methane | 85 | 86 | 58-122 | 1 | 30 | | | | |
| bis(2-Chloroethyl)ether | 85 | 86 | 66-122 | 2 | 30 | | | | |
| bis(2-Chloroisopropyl)ether | 84 | 84 | 50-115 | 0 | 30 | | | | |
| 2-Chloronaphthalene | 91 | 83 | 50-140 | 9 | 30 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | 88 | 91 | 71-130 | 3 | 30 | | | | |
| 4-Chlorophenyl-phenylether | 92 | 92 | 65-117 | 1 | 30 | | | | |
| Dibenzofuran | 88 | 88 | 65-124 | 0 | 30 | | | | |
| 1,2-Dichlorobenzene | 87 | 89 | 72-114 | 2 | 30 | | | | |
| 1,3-Dichlorobenzene | 86 | 89 | 67-118 | 3 | 30 | | | | |
| 1,4-Dichlorobenzene | 86 | 87 | 68-119 | 2 | 30 | | | | |
| 3,3'-Dichlorobenzidine | 38 | 63 | 10-143 | 50* | 30 | | | | |
| 2,4-Dichlorophenol | 93 | 94 | 54-135 | 1 | 30 | | | | |
| 2,6-Dichlorophenol | 0* | 0* | 56-133 | 0 | 30 | | | | |
| 2,4-Dimethylphenol | 84 | 84 | 62-132 | 0 | 30 | | | | |
| 3,5-Dimethylphenol | 111 | 114 | 70-130 | 2 | 30 | | | | |
| 4,6-Dinitro-2-methylphenol | 76 | 65 | 10-148 | 16 | 30 | | | | |
| 2,4-Dinitrophenol | 56 | 44 | 20-143 | 24 | 30 | | | | |
| 1,2-Diphenylhydrazine | 87 | 87 | 51-145 | 0 | 30 | | | | |
| Hexachlorobenzene | 98 | 98 | 46-132 | 1 | 30 | | | | |
| Hexachlorobutadiene | 100 | 98 | 65-125 | 2 | 30 | | | | |
| Hexachlorocyclopentadiene | 98 | 94 | 10-153 | 4 | 30 | | | | |
| Hexachloroethane | 85 | 84 | 24-138 | 1 | 30 | | | | |
| Isophorone | 92 | 92 | 68-119 | 0 | 30 | | | | |
| 2-Methylphenol | 87 | 89 | 62-133 | 3 | 30 | | | | |
| 4-Methylphenol | 82 | 85 | 59-132 | 4 | 30 | | | | |
| NDPA as diphenylamine | 88 | 89 | 70-130 | 1 | 30 | | | | |
| 2-Nitroaniline | 92 | 95 | 64-131 | 3 | 30 | | | | |
| 3-Nitroaniline | 81 | 84 | 31-145 | 4 | 30 | | | | |
| 4-Nitroaniline | 67 | 70 | 30-131 | 5 | 30 | | | | |
| Nitrobenzene | 88 | 88 | 63-125 | 0 | 30 | | | | |
| 2-Nitrophenol | 95 | 95 | 45-146 | 0 | 30 | | | | |
| 4-Nitrophenol | 73 | 73 | 25-142 | 1 | 30 | | | | |
| N-Nitroso-di-n-propylamine | 79 | 82 | 58-126 | 3 | 30 | | | | |
| N-Nitrosodiphenylamine | 89 | 90 | 59-135 | 1 | 30 | | | | |
| Pentachlorophenol | 89 | 88 | 23-145 | 0 | 30 | | | | |
| Phenol | 86 | 87 | 61-130 | 2 | 30 | | | | |
| Pyridine | 75 | 80 | 16-108 | 6 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 97 | 97 | 66-116 | 0 | 30 | | | | |
| 2,4,5-Trichlorophenol | 93 | 96 | 64-131 | 3 | 30 | | | | |
| 2,4,6-Trichlorophenol | 98 | 99 | 60-136 | 1 | 30 | | | | |
| Batch number: 14154SLI026 | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| Acenaphthene | 95 | 98 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 96 | 97 | 60-128 | 1 | 30 | | | | |
| Anthracene | 100 | 102 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 98 | 99 | 44-143 | 0 | 30 | | | | |
| Benzo(a)pyrene | 85 | 87 | 49-137 | 2 | 30 | | | | |
| Benzo(b)fluoranthene | 98 | 99 | 26-142 | 1 | 30 | | | | |
| Benzo(e)pyrene | 76 | 77 | 63-111 | 1 | 30 | | | | |
| Benzo(g,h,i)perylene | 83 | 87 | 33-141 | 5 | 30 | | | | |
| Benzo(k)fluoranthene | 79 | 80 | 49-144 | 2 | 30 | | | | |
| Butylbenzylphthalate | 96 | 97 | 64-156 | 0 | 30 | | | | |
| Di-n-butylphthalate | 98 | 97 | 52-147 | 2 | 30 | | | | |
| Chrysene | 92 | 92 | 43-141 | 0 | 30 | | | | |
| Dibenz(a,h)anthracene | 92 | 96 | 25-145 | 4 | 30 | | | | |
| Diethylphthalate | 81 | 84 | 66-140 | 3 | 30 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Dimethylphthalate | 88 | 88 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 103 | 101 | 48-164 | 2 | 30 | | | | |
| Fluoranthene | 96 | 98 | 38-153 | 2 | 30 | | | | |
| Fluorene | 93 | 94 | 57-130 | 2 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 98 | 98 | 26-139 | 0 | 30 | | | | |
| 1-Methylnaphthalene | 93 | 94 | 59-139 | 1 | 30 | | | | |
| 2-Methylnaphthalene | 97 | 99 | 46-147 | 2 | 30 | | | | |
| Naphthalene | 98 | 99 | 52-136 | 1 | 30 | | | | |
| N-Nitrosodimethylamine | 84 | 84 | 39-134 | 1 | 30 | | | | |
| Di-n-octylphthalate | 102 | 102 | 52-162 | 0 | 30 | | | | |
| Phenanthrene | 101 | 100 | 50-137 | 1 | 30 | | | | |
| Pyrene | 83 | 82 | 26-143 | 1 | 30 | | | | |
| Batch number: 14154A16A | Sample number(s): 7485079-7485081 UNSPK: P483434 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 72 | 77 | 69-123 | 6 | 30 | | | | |
| Batch number: 141550001A | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 101 | 108 | 85-118 | 7 | 50 | | | | |
| 2-Amino-4,6-Dinitrotoluene | 90 | 98 | 69-113 | 8 | 50 | | | | |
| 1,3-Dinitrobenzene | 101 | 107 | 89-119 | 6 | 50 | | | | |
| 2,4-Dinitrotoluene | 99 | 105 | 81-111 | 6 | 50 | | | | |
| 2,6-Dinitrotoluene | 95 | 101 | 86-114 | 6 | 50 | | | | |
| HMX | 96 | 108* | 72-107 | 12 | 50 | | | | |
| Nitrobenzene | 91 | 97 | 86-108 | 6 | 50 | | | | |
| Nitroglycerin | 90 | 104 | 73-116 | 14 | 50 | | | | |
| 2-Nitrotoluene | 95 | 100 | 79-112 | 5 | 50 | | | | |
| 3-Nitrotoluene | 92 | 98 | 72-119 | 6 | 50 | | | | |
| 4-Nitrotoluene | 92 | 99 | 90-118 | 7 | 50 | | | | |
| PETN | 195* | 206* | 71-133 | 5 | 50 | | | | |
| RDX | 96 | 103 | 75-108 | 8 | 50 | | | | |
| Tetryl | 77 | 86 | 58-125 | 11 | 50 | | | | |
| 1,3,5-Trinitrobenzene | 99 | 107 | 58-135 | 8 | 50 | | | | |
| 2,4,6-Trinitrotoluene | 91* | 97 | 92-114 | 6 | 50 | | | | |
| Batch number: 141560024A | Sample number(s): 7485078-7485081 UNSPK: 7485078 | | | | | | | | |
| 2,4-D | 138 | 133 | 42-143 | 3 | 35 | | | | |
| Dalapon | 80 | 79 | 16-98 | 1 | 50 | | | | |
| 2,4-DB | 130 | 128 | 10-179 | 1 | 50 | | | | |
| Dicamba | 123 | 124 | 47-150 | 0 | 50 | | | | |
| Dinoseb | 20 | 22 | 10-115 | 10 | 35 | | | | |
| 2,4-DP (Dichlorprop) | 168 | 167 | 32-171 | 1 | 50 | | | | |
| MCPA | 112 | 107 | 54-138 | 5 | 50 | | | | |
| MCPP (Mecoprop) | 108 | 106 | 46-138 | 2 | 50 | | | | |
| 2,4,5-T | 155 | 149 | 12-172 | 3 | 35 | | | | |
| 2,4,5-TP | 137 | 139 | 65-156 | 2 | 35 | | | | |
| Batch number: 141550002A | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 105 | 102 | 80-120 | 3 | 20 | | | | |
| Batch number: 141540027A | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| PCB-1016 | 115 | 110 | 41-135 | 4 | 50 | | | | |
| PCB-1260 | 121 | 113 | 40-134 | 7 | 50 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141580004A | Sample number(s): 7485078-7485081 UNSPK: 7485078 | | | | | | | | |
| Aldrin | 97 | 91 | 16-126 | 5 | 50 | | | | |
| Alpha BHC | 82 | 82 | 14-140 | 1 | 50 | | | | |
| Beta BHC | 102 | 95 | 42-133 | 7 | 50 | | | | |
| Gamma BHC - Lindane | 100 | 95 | 30-137 | 5 | 50 | | | | |
| p,p-DDD | 103 | 100 | 43-149 | 2 | 50 | | | | |
| p,p-DDE | 99 | 94 | 35-152 | 4 | 50 | | | | |
| p,p-DDT | 98 | 92 | 12-193 | 6 | 50 | | | | |
| Delta BHC | 109 | 102 | 13-153 | 6 | 50 | | | | |
| Dieldrin | 104 | 100 | 41-153 | 4 | 50 | | | | |
| Endosulfan I | 82 | 79 | 26-146 | 3 | 50 | | | | |
| Endosulfan II | 97 | 92 | 34-141 | 5 | 50 | | | | |
| Endosulfan Sulfate | 111 | 106 | 10-181 | 3 | 50 | | | | |
| Endrin | 93 | 88 | 30-152 | 4 | 50 | | | | |
| Endrin Aldehyde | 100 | 95 | 23-138 | 4 | 50 | | | | |
| Endrin Ketone | 105 | 101 | 30-148 | 3 | 50 | | | | |
| Heptachlor | 84 | 80 | 16-152 | 5 | 50 | | | | |
| Heptachlor Epoxide | 102 | 98 | 33-144 | 4 | 50 | | | | |
| Methoxychlor | 100 | 94 | 41-161 | 6 | 50 | | | | |
| Batch number: 141550013A | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| Diethylene glycol | 21* | 25* | 59-109 | 15 | 20 | | | | |
| Ethylene glycol | 84 | 96 | 63-107 | 14 | 20 | | | | |
| Propylene glycol | 93 | 108* | 63-107 | 15 | 20 | | | | |
| Triethylene glycol | 3* | 4* | 66-122 | 30* | 20 | | | | |
| Batch number: 141540029A | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| EFH (C12-C14) | 94 | 92 | 49-123 | 2 | 20 | | | | |
| EFH (C15-C20) | 107 | 100 | 49-123 | 7 | 20 | | | | |
| EFH (C21-C30) | 96 | 83 | 49-123 | 10 | 20 | | | | |
| EFH (C30-C40) | 58 | 47* | 49-123 | 10 | 20 | | | | |
| EFH (C8-C11) | 90 | 89 | 49-123 | 1 | 20 | | | | |
| Batch number: 141540030A | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 74 | 79 | 49-123 | 7 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 79 | 82 | 49-123 | 5 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 155* | 84 | 49-123 | 59* | 20 | | | | |
| EFH C30-C40 w/ SiGel | 73 | 72 | 49-123 | 1 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 53 | 59 | 49-123 | 11 | 20 | | | | |
| Batch number: 141560017A | Sample number(s): 7485078-7485081 UNSPK: P483434 | | | | | | | | |
| m-Terphenyl | 89 | 97 | 75-125 | 9 | 20 | | | | |
| o-Terphenyl | 87 | 96 | 75-125 | 9 | 20 | | | | |
| p-Terphenyl | 83 | 90 | 75-125 | 8 | 20 | | | | |
| Batch number: 141610637001 | Sample number(s): 7485078-7485081 UNSPK: P492863 BKG: P492863 | | | | | | | | |
| Aluminum | 2006 (2) | 1087 (2) | 75-125 | 10 | 20 | 15,400 | 12,100 | 24* | 20 |
| Antimony | 38* | 42* | 75-125 | 10 | 20 | 4.00 U | 3.96 U | 0 (1) | 20 |
| Arsenic | 106 | 107 | 75-125 | 1 | 20 | 3.83 J | 4.53 | 17 (1) | 20 |
| Barium | 101 | 99 | 75-125 | 2 | 20 | 104 | 75.9 | 31* | 20 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 103 | 103 | 75-125 | 0 | 20 | 0.659 J | 0.558 J | 17 (1) | 20 |
| Boron | 93 | 96 | 75-125 | 3 | 20 | 8.58 J | 4.18 J | 69* (1) | 20 |
| Cadmium | 95 | 96 | 75-125 | 1 | 20 | 0.349 J | 0.177 J | 65* (1) | 20 |
| Calcium | 154 (2) | 186 (2) | 75-125 | 3 | 20 | 3,870 | 2,860 | 30* | 20 |
| Chromium | 112 | 104 | 75-125 | 4 | 20 | 18.8 | 19.5 | 3 | 20 |
| Cobalt | 96 | 96 | 75-125 | 0 | 20 | 5.50 | 6.52 | 17 | 20 |
| Copper | 106 | 105 | 75-125 | 1 | 20 | 9.37 | 8.30 | 12 (1) | 20 |
| Iron | 2333 (2) | -506 (2) | 75-125 | 12 | 20 | 21,200 | 23,900 | 12 | 20 |
| Lead | 107 | 99 | 75-125 | 5 | 20 | 9.79 | 4.07 | 83* (1) | 20 |
| Lithium | 104 | 101 | 75-125 | 2 | 20 | 32.6 | 28.8 | 13 | 20 |
| Magnesium | 379 (2) | 119 (2) | 75-125 | 10 | 20 | 4,480 | 6,100 | 31* | 20 |
| Manganese | 131 (2) | 66 (2) | 75-125 | 7 | 20 | 380 | 371 | 2 | 20 |
| Molybdenum | 93 | 95 | 75-125 | 2 | 20 | 0.648 J | 0.430 J | 41* (1) | 20 |
| Nickel | 100 | 98 | 75-125 | 1 | 20 | 14.2 | 11.0 | 25* | 20 |
| Phosphorus | 86 (2) | 86 (2) | 75-125 | 0 | 20 | 413 | 489 | 17 | 20 |
| Potassium | 170 (2) | 128 (2) | 75-125 | 7 | 20 | 4,230 | 2,390 | 56* | 20 |
| Sodium | 101 | 100 | 75-125 | 0 | 20 | 78.8 J | 72.9 J | 8 (1) | 20 |
| Tin | 87 | 89 | 75-125 | 2 | 20 | 2.87 J | 2.83 J | 1 (1) | 20 |
| Titanium | 395 (2) | 305 (2) | 75-125 | 7 | 20 | 1,010 | 1,100 | 8 | 20 |
| Vanadium | 114 | 107 | 75-125 | 4 | 20 | 35.6 | 40.3 | 12 | 20 |
| Zinc | 107 | 97 | 75-125 | 5 | 20 | 61.0 | 54.5 | 11 | 20 |
| Zirconium | 89 | 91 | 75-125 | 2 | 20 | 3.90 J | 4.02 J | 3 (1) | 20 |
| Batch number: 141610637001A | Sample number(s): 7485078-7485081 UNSPK: P492863 BKG: P492863 | | | | | | | | |
| Silver | 110 | 123 | 75-125 | 11 | 20 | 0.0514 J | 0.198 U | 200* (1) | 20 |
| Strontium | 125 | 217* | 75-125 | 18 | 20 | 26.7 | 11.0 | 83* | 20 |
| Thallium | 119 | 132* | 75-125 | 7 | 20 | 0.272 | 0.261 | 4 (1) | 20 |
| Batch number: 141610637001B | Sample number(s): 7485078-7485081 UNSPK: P492863 BKG: P492863 | | | | | | | | |
| Selenium | 107 | 114 | 75-125 | 5 | 20 | 0.345 J | 0.328 J | 5 (1) | 20 |
| Batch number: 141610638001 | Sample number(s): 7485078-7485081 UNSPK: P492863 BKG: P492863 | | | | | | | | |
| 3a Mercury 7471A | 104 | 105 | 65-135 | 0 | 20 | 0.0195 | 0.0161 U | 200* (1) | 20 |
| Batch number: 14155243201A | Sample number(s): 7485078-7485081 UNSPK: P483434 BKG: P483434 | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 80 | | 75-125 | | | 0.40 U | 0.40 U | 0 (1) | 20 |
| Batch number: 14154039403A | Sample number(s): 7485078-7485081 BKG: 7485078 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.79 | 6.82 | 0 | 3 |
| Batch number: 14157162401B | Sample number(s): 7485078-7485081 BKG: 7485079 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 2.7 | 2.8 | 1 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Surrogate Quality Control

Analysis Name: 8a SVOCs by EPA 8270D
Batch number: 14154SLH026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7485078 | 71 | 78 | 80 | 72 | 78 | 85 |
| 7485079 | 77 | 85 | 87 | 78 | 87 | 93 |
| 7485080 | 73 | 79 | 82 | 72 | 80 | 87 |
| 7485081 | 86 | 94 | 96 | 85 | 92 | 99 |
| Blank | 86 | 95 | 107 | 90 | 95 | 110 |
| LCS | 91 | 97 | 93 | 83 | 87 | 96 |
| LCSD | 94 | 99 | 96 | 85 | 90 | 99 |
| MS | 80 | 89 | 89 | 85 | 91 | 97 |
| MSD | 81 | 90 | 91 | 84 | 90 | 97 |
| Limits: | 25-120 | 25-130 | 35-130 | 40-130 | 45-130 | 45-130 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14154SLI026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7485078 | 106 | 119* | 97 |
| 7485079 | 100 | 111 | 90 |
| 7485080 | 100 | 112 | 91 |
| 7485081 | 100 | 108 | 88 |
| Blank | 89 | 99 | 77 |
| LCS | 102 | 117 | 92 |
| MS | 95 | 109 | 86 |
| MSD | 96 | 111 | 88 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14154A16A

| | Trifluorotoluene-F |
|---|---|
| 7485079 | 92 |
| 7485080 | 90 |
| 7485081 | 90 |
| Blank | 90 |
| LCS | 96 |
| MS | 83 |
| MSD | 87 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14157A94A

| | Trifluorotoluene-F |
|---|---|
| 7485082 | 85 |
| Blank | 86 |
| LCS | 94 |
| LCSD | 93 |
| Limits: | 63-135 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Surrogate Quality Control

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141540027A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7485078 | 108 | 103 |
| 7485079 | 113 | 107 |
| 7485080 | 118 | 108 |
| 7485081 | 103 | 102 |
| Blank | 116 | 110 |
| LCS | 122* | 116 |
| LCSD | 124* | 121* |
| MS | 121* | 116 |
| MSD | 116 | 110 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 24a Energetics by 8330A
Batch number: 141550001A

| | 2-Nitro-m-xylene |
|---|---|
| 7485078 | 122 |
| 7485079 | 117 |
| 7485080 | 125 |
| 7485081 | 120 |
| Blank | 112 |
| LCS | 113 |
| LCSD | 118 |
| MS | 106 |
| MSD | 104 |
| Limits: | 80-146 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 141560024A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7485078 | 94 |
| 7485079 | 96 |
| 7485080 | 92 |
| 7485081 | 94 |
| Blank | 61 |
| LCS | 115 |
| MS | 111 |
| MSD | 109 |
| Limits: | 50-150 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141580004A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7485078 | 93 | 104 |
| 7485079 | 89 | 104 |
| 7485080 | 85 | 103 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7485081 | 85 | 99 |
| Blank | 98 | 105 |
| LCS | 89 | 99 |
| MS | 98 | 108 |
| MSD | 93 | 105 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141540029A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7485078 | 91 | 94 |
| 7485079 | 75 | 91 |
| 7485080 | 75 | 91 |
| 7485081 | 73 | 88 |
| Blank | 78 | 94 |
| LCS | 108 | 111 |
| MS | 78 | 94 |
| MSD | 77 | 92 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141540030A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7485078 | 73 | 83 |
| 7485079 | 69 | 79 |
| 7485080 | 74 | 82 |
| 7485081 | 69 | 77 |
| Blank | 76 | 85 |
| LCS | 73 | 84 |
| MS | 69 | 84 |
| MSD | 73 | 82 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 26a Glycols by EPA 8015C
Batch number: 141550013A

| | Tetramethylene glycol |
|---|---|
| 7485078 | 94 |
| 7485079 | 90 |
| 7485080 | 93 |
| 7485081 | 95 |
| Blank | 80 |
| LCS | 102 |
| MS | 92 |
| MSD | 96 |
| Limits: | 75-116 |

Analysis Name: 27a Terphenyls by 8015B
Batch number: 141560017A

| | n-Triacontane-d62 |
|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1478782
Reported: 07/07/14 at 01:26 PM

## Surrogate Quality Control

| | |
|---|---|
| 7485078 | 105 |
| 7485079 | 104 |
| 7485080 | 97 |
| 7485081 | 92 |
| Blank | 102 |
| LCS | 106 |
| MS | 99 |
| MSD | 108 |
| Limits: | 19-152 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14161001

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7485078 | 69 | 78 | 89 | 89 | 87 | 93 |
| 7485079 | 65 | 72 | 83 | 81 | 81 | 83 |
| 7485080 | 58 | 74 | 74 | 75 | 73 | 83 |
| 7485081 | 63 | 70 | 85 | 85 | 84 | 90 |
| Blank | 73 | 77 | 83 | 84 | 83 | 86 |
| OPR | 72 | 82 | 86 | 87 | 82 | 83 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7485078 | 102 | 72 | 93 | 81 | 82 | 89 |
| 7485079 | 92 | 60 | 79 | 72 | 69 | 76 |
| 7485080 | 81 | 58 | 73 | 69 | 67 | 76 |
| 7485081 | 104 | 62 | 78 | 72 | 72 | 82 |
| Blank | 88 | 76 | 81 | 76 | 75 | 83 |
| OPR | 88 | 72 | 89 | 79 | 69 | 77 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7485078 | 87 | 89 | 110 | 80 | 82 |
| 7485079 | 74 | 81 | 104 | 67 | 65 |
| 7485080 | 71 | 73 | 101 | 64 | 61 |
| 7485081 | 78 | 82 | 116 | 72 | 72 |
| Blank | 79 | 78 | 104 | 66 | 62 |
| OPR | 75 | 73 | 104 | 62 | 55 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/2/2014 A-13013

CarrierName: FedEx G-1478782

AirbillNo: 770169300503 S-4785078-82

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140602-05

Cooler #: 2

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SL-653-SA5C-TR-0.5 | 6/2/14 10:20 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | X | X | | X | X | X | | | | X | X | | X | X | | | | | | | | | | |
| SL-653-SA5C-TR-5.0 | 6/2/14 10:45 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | X | X | | X | X | X | | | | X | X | | X | X | | | | | | | | | | |
| SL-653-SA5C-TR-5.0 | 6/2/14 10:45 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-653-SA5C-TR-10.0 | 6/2/14 10:55 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | X | X | | X | X | X | | | | X | X | | X | X | | | | | | | | | | |
| SL-653-SA5C-TR-10.0 | 6/2/14 10:55 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| SL-653-SA5C-TR-15.0 | 6/2/14 09:20 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | X | X | | X | X | X | | | | X | X | | X | X | | | | | | | | | | |
| SL-653-SA5C-TR-15.0 | 6/2/14 09:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| TB4-060214 | 6/2/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel cleanup required on half of extract. Analyze all extract for EFH.

**Sampler:** Andrew Pam

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stephanie Myers | 06/02/14 | 1000 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Cashier | 6/3/14 | 0920 |

Trench Sampling 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16210

Group Number(s): 1478782

Client: CDM SMITH

## SSFL PHASE 3

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/03/2014 9:20 |
| Number of Packages: | 3 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Corey Eshleman (3647) at 10:15 on 06/03/2014

### Samples Chilled Details: SSFL PHASE 3

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 1.1 | DT | Wet | Y | Bagged | N | N |
| 2 | DT121 | 2.0 | DT | Wet | Y | Bagged | N | N |
| 3 | DT121 | 1.4 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 16, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/04/2014
Group Number: 1479236
SDG: PH214
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-602-SA5B-SB-4.5-5.0 Soil | 7486854 |
| SVL-553-SA5D-SB-4.5-5.5 Soil | 7486855 |
| SVL-553-SA5D-SB-9.0-10.0 Soil | 7486856 |
| SVL-553-SA5D-SB-14.0-15.0 Soil | 7486857 |
| SVL-553-SA5D-SB-19.0-20.0 Soil | 7486858 |
| SVL-556-SA5D-SB-4.5-5.5 Soil | 7486859 |
| SVL-556-SA5D-SB-10.0-11.0 Soil | 7486860 |
| TB1-060314 Water | 7486861 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: SVL-602-SA5B-SB-4.5-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7486854**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 09:50 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60245 SDG#: PH214-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.04 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.04 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.04 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.04 |
| 10237 | t-Butyl alcohol | 75-65-0 | 55 | U | 55 | 22 | 1.04 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.04 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-602-SA5B-SB-4.5-5.0 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7486854**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 09:50 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60245 SDG#: PH214-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.04 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.04 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.04 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.04 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 22:15 | Andrea E Lando | 1.04 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:38 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-602-SA5B-SB-4.5-5.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7486854**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 09:50 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

60245 SDG#: PH214-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415534705 | 06/04/2014 16:38 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:23 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14161162401A | 06/10/2014 20:31 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-553-SA5D-SB-4.5-5.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486855**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:03 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55345 SDG#: PH214-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 23 | U | 23 | 8 | 0.99 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 23 | 0.99 |
| 10237 | Acrylonitrile | 107-13-1 | 23 | U | 23 | 5 | 0.99 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 0.99 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 5 | 0.99 |
| 10237 | t-Butyl alcohol | 75-65-0 | 56 | U | 56 | 23 | 0.99 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.99 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.99 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-553-SA5D-SB-4.5-5.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486855**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:03 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55345 SDG#: PH214-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 3 | 0.99 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 0.99 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.99 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 0.99 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.99 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 0.99 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 22:38 | Andrea E Lando | 0.99 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:38 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-553-SA5D-SB-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486855**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:03 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55345 SDG#: PH214-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415534705 | 06/04/2014 16:38 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:25 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14161162401A | 06/10/2014 20:31 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-553-SA5D-SB-9.0-10.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486856**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:11 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55390 SDG#: PH214-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.86 |
| 10237 | Acrolein | 107-02-8 | 98 | U | 98 | 20 | 0.86 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.86 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.86 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.86 |
| 10237 | t-Butyl alcohol | 75-65-0 | 49 | U | 49 | 20 | 0.86 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.86 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.86 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.86 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-553-SA5D-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486856**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:11 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55390 SDG#: PH214-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.86 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.86 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.86 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.86 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.86 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.86 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.86 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.86 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.86 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.86 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 23:00 | Andrea E Lando | 0.86 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:38 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-553-SA5D-SB-9.0-10.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486856**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:11 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55390 SDG#: PH214-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415534705 | 06/04/2014 16:38 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:28 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14161162401A | 06/10/2014 20:31 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-553-SA5D-SB-14.0-15.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486857**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:15 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55314 SDG#: PH214-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.94 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 0.94 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.94 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.94 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.94 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 0.94 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.94 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.94 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.94 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.94 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.94 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.94 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-553-SA5D-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486857**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:15 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55314 SDG#: PH214-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.94 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.94 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.94 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.94 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.94 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.94 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 23:23 | Andrea E Lando | 0.94 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-553-SA5D-SB-14.0-15.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486857**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:15 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55314 SDG#: PH214-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:29 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14161162401A | 06/10/2014 20:31 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-553-SA5D-SB-19.0-20.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486858**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:22 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55319 SDG#: PH214-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.92 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.92 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.92 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.92 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.92 |
| 10237 | t-Butyl alcohol | 75-65-0 | 52 | U | 52 | 21 | 0.92 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.92 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.92 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.92 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.92 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.92 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.92 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-553-SA5D-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486858**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:22 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55319 SDG#: PH214-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.92 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.92 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.92 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.92 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.92 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.92 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/05/2014 23:45 | Andrea E Lando | 0.92 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-553-SA5D-SB-19.0-20.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486858**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 12:22 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55319 SDG#: PH214-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:31 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14161162401A | 06/10/2014 20:31 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-556-SA5D-SB-4.5-5.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486859**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 14:00 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55645 SDG#: PH214-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.92 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.92 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.92 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.92 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.92 |
| 10237 | t-Butyl alcohol | 75-65-0 | 52 | U | 52 | 21 | 0.92 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.92 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.92 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.92 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.92 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.92 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.92 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-556-SA5D-SB-4.5-5.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486859**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 14:00 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55645 SDG#: PH214-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.92 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.92 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.92 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.92 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.92 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.92 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.92 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.92 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.92 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.92 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.92 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 10.8 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 00:08 | Andrea E Lando | 0.92 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-556-SA5D-SB-4.5-5.5 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486859**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 14:00 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55645 SDG#: PH214-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:33 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14161162401B | 06/10/2014 20:31 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-556-SA5D-SB-10.0-11.0 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7486860**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 14:03 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55610 SDG#: PH214-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.9 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.9 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.9 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.9 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.9 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.9 |
| 10237 | t-Butyl alcohol | 75-65-0 | 51 | U | 51 | 21 | 0.9 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.9 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.9 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.9 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.9 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.9 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.9 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.9 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.9 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.9 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.9 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.9 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.9 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.9 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-556-SA5D-SB-10.0-11.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486860**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 14:03 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55610 SDG#: PH214-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.9 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.9 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.9 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.9 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.9 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.9 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.9 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.9 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.9 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.9 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.9 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.9 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141562AA | 06/06/2014 00:30 | Andrea E Lando | 0.9 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-556-SA5D-SB-10.0-11.0 Soil**
**SSFL Phase 3 Subarea 5D**

**LL Sample # SW 7486860**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 14:03 by VV

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55610 SDG#: PH214-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415534705 | 06/04/2014 16:37 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415534705 | 06/04/2014 16:35 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14161162401B | 06/10/2014 20:31 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB1-060314 Water**
**SSFL Phase 3 Subarea 5B/5D**

**LL Sample # WW 7486861**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 08:00

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB163 SDG#: PH214-08TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB1-060314 Water**
**SSFL Phase 3 Subarea 5B/5D**

**LL Sample # WW 7486861**
**LL Group # 1479236**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/03/2014 08:00

Submitted: 06/04/2014 09:20
Reported: 06/16/2014 13:20

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB163 SDG#: PH214-08TB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141562AA | 06/05/2014 17:15 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141562AA | 06/05/2014 17:15 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479236
Reported: 06/16/14 at 01:20 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141562AA | Sample number(s): 7486854-7486860 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 99 | 100 | 41-149 | 1 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 81 | 94 | 50-137 | 15 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 96 | 91 | 58-123 | 6 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 97 | 99 | 63-130 | 2 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 102 | 100 | 80-120 | 2 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 2 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 106 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 98 | 97 | 75-120 | 0 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 101 | 102 | 70-126 | 1 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 100 | 94 | 32-162 | 5 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 92 | 93 | 47-136 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 100 | 107 | 66-133 | 6 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 72-120 | 0 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 104 | 101 | 69-120 | 3 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 99 | 75-120 | 0 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 104 | 96 | 63-128 | 8 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 104 | 102 | 69-130 | 2 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 102 | 105 | 80-120 | 3 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 95 | 89 | 17-171 | 6 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 83 | 85 | 52-134 | 3 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 93 | 92 | 70-130 | 1 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 93 | 90 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 104 | 78-120 | 0 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 101 | 105 | 79-120 | 3 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 81 | 79 | 22-131 | 2 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 93 | 97 | 50-132 | 4 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 103 | 106 | 77-120 | 3 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 75-120 | 0 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 103 | 103 | 80-120 | 0 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 26-137 | 3 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 98 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 106 | 108 | 66-136 | 2 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 102 | 73-129 | 8 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 111 | 103 | 79-120 | 8 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 98 | 98 | 77-120 | 0 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 101 | 73-120 | 0 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 101 | 99 | 72-123 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479236
Reported: 06/16/14 at 01:20 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 103 | 104 | 77-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 96 | 74-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 101 | 100 | 69-120 | 0 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 95 | 98 | 59-134 | 3 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 2 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 102 | 95 | 64-137 | 7 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 96 | 99 | 78-120 | 3 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 96 | 100 | 46-130 | 5 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 90 | 91 | 40-129 | 1 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 68-128 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 98 | 101 | 69-120 | 3 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 110 | 105 | 72-130 | 5 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 104 | 101 | 69-126 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 92 | 93 | 43-133 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 115 | 103 | 80-124 | 11 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 77-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 105 | 104 | 76-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 102 | 71-123 | 4 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 117 | 119 | 78-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 104 | 104 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 98 | 99 | 64-120 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | 99 | 68-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 103 | 100 | 63-135 | 3 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | 104 | 80-120 | 3 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 103 | 105 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 96 | 93 | 58-133 | 3 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 105 | 110 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 79-120 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 78-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 113 | 116 | 40-127 | 2 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 97 | 93 | 59-120 | 4 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 103 | 80-120 | 2 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 103 | 80-120 | 0 | 30 |
| Batch number: Y141562AA | Sample number(s): 7486861 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 92 | 91 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 79 | 78 | 52-129 | 2 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 95 | 92 | 62-120 | 3 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 93 | 93 | 75-120 | 0 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 101 | 97 | 80-121 | 4 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 94 | 93 | 73-120 | 1 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 90 | 90 | 61-120 | 0 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 87 | 86 | 54-133 | 0 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 98 | 98 | 75-120 | 0 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 90 | 90 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 80-120 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 94 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 95 | 92 | 58-126 | 3 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 105 | 104 | 74-130 | 1 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 97 | 97 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479236
Reported: 06/16/14 at 01:20 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 97 | 93 | 56-120 | 4 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 106 | 105 | 54-126 | 2 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 80-122 | 3 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 107 | 107 | 63-120 | 0 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 95 | 94 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 66 | 67 | 47-120 | 1 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 87 | 87 | 56-120 | 0 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 97 | 96 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 76-120 | 0 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 80-120 | 2 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 110 | 107 | 48-132 | 3 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 94 | 93 | 80-120 | 2 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 65-135 | 1 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 111 | 110 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 99 | 97 | 80-120 | 3 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 114 | 113 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 93 | 92 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 92 | 92 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 98 | 97 | 67-124 | 2 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 101 | 101 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 92 | 91 | 80-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 92 | 91 | 76-120 | 1 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 94 | 93 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 99 | 98 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 106 | 106 | 46-152 | 0 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 90 | 91 | 51-125 | 1 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 86 | 86 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 65-120 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 97 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 110 | 108 | 75-128 | 2 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 88 | 87 | 51-124 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 109 | 108 | 80-120 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 80-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 88 | 70-120 | 1 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 103 | 100 | 80-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 91 | 91 | 58-126 | 0 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 90 | 88 | 66-126 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 95 | 94 | 80-120 | 0 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 101 | 99 | 80-120 | 2 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 107 | 103 | 65-130 | 3 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 93 | 95 | 76-120 | 2 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 96 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 69 | 68 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479236
Reported: 06/16/14 at 01:20 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 1 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 1 | 30 |
| Batch number: 14161162401A | Sample number(s): 7486854-7486858 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| Batch number: 14161162401B | Sample number(s): 7486859-7486860 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14161162401A | Sample number(s): 7486854-7486858 | | | | | BKG: 7486854 | | | |
| 14a Moisture Content by 160.3 | | | | | | 5.2 | 4.9 | 6 | 20 |
| Batch number: 14161162401B | Sample number(s): 7486859-7486860 | | | | | BKG: 7486859 | | | |
| 14a Moisture Content by 160.3 | | | | | | 10.8 | 11.3 | 4 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141562AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7486854 | 102 | 97 | 98 | 94 |
| 7486855 | 106 | 104 | 98 | 95 |
| 7486856 | 103 | 101 | 100 | 94 |
| 7486857 | 103 | 96 | 99 | 92 |
| 7486858 | 105 | 100 | 101 | 89 |
| 7486859 | 104 | 98 | 99 | 89 |
| 7486860 | 104 | 100 | 99 | 92 |
| Blank | 102 | 104 | 100 | 95 |
| LCS | 102 | 104 | 104 | 100 |
| LCSD | 101 | 100 | 103 | 101 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141562AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7486861 | 101 | 100 | 97 | 94 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479236
Reported: 06/16/14 at 01:20 PM

## Surrogate Quality Control

| | | | | |
|---|---|---|---|---|
| Blank | 100 | 98 | 97 | 95 |
| LCS | 100 | 98 | 97 | 98 |
| LCSD | 99 | 100 | 98 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/3/2014
CarrierName: FedEx
AirbillNo: 770183423794

A-13013
G-1479236
S-7486854-61

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140603-01
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-602-SA5B-SB-4.5-5.0 | 6/3/14 09:50 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-602-SA5B-SB-4.5-5.0 | 6/3/14 09:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-553-SA5D-SB-4.5-5.5 | 6/3/14 12:03 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-553-SA5D-SB-4.5-5.5 | 6/3/14 12:03 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-553-SA5D-SB-9.0-10.0 | 6/3/14 12:11 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-553-SA5D-SB-9.0-10.0 | 6/3/14 12:11 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-553-SA5D-SB-14.0-15.0 | 6/3/14 12:15 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-553-SA5D-SB-14.0-15.0 | 6/3/14 12:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-553-SA5D-SB-19.0-20.0 | 6/3/14 12:22 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-553-SA5D-SB-19.0-20.0 | 6/3/14 12:22 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-556-SA5D-SB-4.5-5.5 | 6/3/14 14:00 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-556-SA5D-SB-4.5-5.5 | 6/3/14 14:00 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| SVL-556-SA5D-SB-10.0-11.0 | 6/3/14 14:03 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-556-SA5D-SB-10.0-11.0 | 6/3/14 14:03 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | soil moisture |
| TB1-060314 | 6/3/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 06/03/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 6/4/14 | 0720 |

COC Rev 4

Soil Vapor Sampling 1 of 1

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/04/2014 9:20 |
| Number of Packages: | 2 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:02 on 06/04/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | 8013596-IR | 2.7 | IR | Wet | Y | Bagged | N | N |
| 2 | DT131 | 2.3 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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ANALYTICAL RESULTS

Prepared by:

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Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 16, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/05/2014
Group Number: 1479554
SDG: PH216
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB3-060414 Water | 7488097 |
| SVL-577-SA5B-SB-5.3-5.8 Soil | 7488098 |
| SVL-586-SA5B-SB-3.75-4.25 Soil | 7488099 |
| SVL-586-SA5B-SB-3.75-4.25MS Soil | 7488100 |
| SVL-586-SA5B-SB-3.75-4.25MSD Soil | 7488101 |
| SVL-986-SA5B-SB-3.75-4.25 Soil | 7488102 |
| SVL-576-SA5A-SB-2.5-3.0 Soil | 7488103 |
| SVL-571-SA5A-SB-2.5-3.0 Soil | 7488104 |
| SVL-574-SA5A-SB-1.5-2.0 Soil | 7488105 |
| SVL-566-SA5A-SB-3.0-3.5 Soil | 7488106 |
| EB1-060414 Water | 7488107 |
| EB2-060414 Water | 7488108 |
| EB4-060414 Water | 7488109 |
| EB5-060414 Water | 7488110 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB3-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488097**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--TB3 SDG#: PH216-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB3-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488097**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

--TB3 SDG#: PH216-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141562AA | 06/05/2014 17:37 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141562AA | 06/05/2014 17:37 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-577-SA5B-SB-5.3-5.8 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7488098**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:40 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57753 SDG#: PH216-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 7 | 0.86 |
| 10237 | Acrolein | 107-02-8 | 94 | U | 94 | 19 | 0.86 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.86 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.86 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.86 |
| 10237 | t-Butyl alcohol | 75-65-0 | 47 | U | 47 | 19 | 0.86 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.86 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.86 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.86 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-577-SA5B-SB-5.3-5.8 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7488098**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:40 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57753 SDG#: PH216-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.86 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.86 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.86 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.86 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.86 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.86 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.86 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.86 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 18:27 | Chelsea B Stong | 0.86 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-577-SA5B-SB-5.3-5.8 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488098**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:40 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57753 SDG#: PH216-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 14:59 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-586-SA5B-SB-3.75-4.25 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7488099**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.03 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.03 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.03 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.03 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.03 |
| 10237 | t-Butyl alcohol | 75-65-0 | 54 | U | 54 | 22 | 1.03 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.03 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.03 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.03 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.03 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.03 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.03 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-586-SA5B-SB-3.75-4.25 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488099**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.03 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.03 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.03 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.03 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.03 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.03 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.03 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.03 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.03 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.03 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.03 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 18:50 | Chelsea B Stong | 1.03 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-586-SA5B-SB-3.75-4.25 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488099**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:01 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-586-SA5B-SB-3.75-4.25MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488100**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 140 | 22 | 8 | 1.04 |
| 10237 | Acrolein | 107-02-8 | 140 | 110 | 22 | 1.04 |
| 10237 | Acrylonitrile | 107-13-1 | 95 | 22 | 4 | 1.04 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 20 | 5 | 1 | 1.04 |
| 10237 | Benzene | 71-43-2 | 23 | 5 | 0.5 | 1.04 |
| 10237 | Bromobenzene | 108-86-1 | 22 | 5 | 1 | 1.04 |
| 10237 | Bromochloromethane | 74-97-5 | 27 | 5 | 1 | 1.04 |
| 10237 | Bromodichloromethane | 75-27-4 | 21 | 5 | 1 | 1.04 |
| 10237 | Bromoform | 75-25-2 | 20 | 5 | 1 | 1.04 |
| 10237 | Bromomethane | 74-83-9 | 24 | 5 | 2 | 1.04 |
| 10237 | 2-Butanone | 78-93-3 | 130 | 11 | 4 | 1.04 |
| 10237 | t-Butyl alcohol | 75-65-0 | 270 | 54 | 22 | 1.04 |
| 10237 | n-Butylbenzene | 104-51-8 | 21 | 5 | 1 | 1.04 |
| 10237 | sec-Butylbenzene | 135-98-8 | 23 | 5 | 1 | 1.04 |
| 10237 | tert-Butylbenzene | 98-06-6 | 23 | 5 | 1 | 1.04 |
| 10237 | Carbon Disulfide | 75-15-0 | 24 | 5 | 1 | 1.04 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 25 | 5 | 1 | 1.04 |
| 10237 | Chlorobenzene | 108-90-7 | 23 | 5 | 1 | 1.04 |
| 10237 | Chloroethane | 75-00-3 | 23 | 5 | 2 | 1.04 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 15 | 11 | 2 | 1.04 |
| 10237 | Chloroform | 67-66-3 | 23 | 5 | 1 | 1.04 |
| 10237 | 1-Chlorohexane | 544-10-5 | 21 | 5 | 1 | 1.04 |
| 10237 | Chloromethane | 74-87-3 | 24 | 5 | 2 | 1.04 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 23 | 5 | 1 | 1.04 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 23 | 5 | 1 | 1.04 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 20 | 6 | 2 | 1.06 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 19 | 5 | 2 | 1.04 |
| 10237 | Dibromochloromethane | 124-48-1 | 23 | 5 | 1 | 1.04 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 22 | 5 | 1 | 1.04 |
| 10237 | Dibromomethane | 74-95-3 | 20 | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 21 | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 22 | 5 | 1 | 1.04 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 22 | 5 | 1 | 1.04 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 27 | 5 | 2 | 1.04 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 22 | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 22 | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 26 | 5 | 1 | 1.04 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 23 | 5 | 1 | 1.04 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 26 | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 21 | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 21 | 5 | 1 | 1.04 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 24 | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 25 | 5 | 1 | 1.04 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 20 | 5 | 1 | 1.04 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 22 | 5 | 1 | 1.04 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 21 | 5 | 1 | 1.04 |
| 10237 | Ethylbenzene | 100-41-4 | 24 | 5 | 1 | 1.04 |
| 10237 | Freon 113 | 76-13-1 | 25 | 5 | 2 | 1.04 |
| 10237 | Freon 133a | 75-88-7 | 25 | 6 | 2 | 1.06 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 20 | 5 | 2 | 1.04 |
| 10237 | 2-Hexanone | 591-78-6 | 87 | 11 | 3 | 1.04 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-586-SA5B-SB-3.75-4.25MS Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7488100**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 21 | 5 | 1 | 1.04 |
| 10237 | Isopropylbenzene | 98-82-8 | 23 | 5 | 1 | 1.04 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 22 | 5 | 1 | 1.04 |
| 10237 | Methyl Iodide | 74-88-4 | 25 | 5 | 3 | 1.04 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 21 | 5 | 0.5 | 1.04 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 87 | 11 | 3 | 1.04 |
| 10237 | Methylene Chloride | 75-09-2 | 24 | 5 | 2 | 1.04 |
| 10237 | n-Propylbenzene | 103-65-1 | 23 | 5 | 1 | 1.04 |
| 10237 | Styrene | 100-42-5 | 23 | 5 | 1 | 1.04 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 23 | 5 | 1 | 1.04 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 20 | 5 | 1 | 1.04 |
| 10237 | Tetrachloroethene | 127-18-4 | 24 | 5 | 1 | 1.04 |
| 10237 | Toluene | 108-88-3 | 24 | 5 | 1 | 1.04 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 17 | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 18 | 5 | 1 | 1.04 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 23 | 5 | 1 | 1.04 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 22 | 5 | 1 | 1.04 |
| 10237 | Trichloroethene | 79-01-6 | 23 | 5 | 1 | 1.04 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 25 | 5 | 2 | 1.04 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 21 | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 23 | 5 | 1 | 1.04 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 23 | 5 | 1 | 1.04 |
| 10237 | Vinyl Acetate | 108-05-4 | 61 | 11 | 2 | 1.06 |
| 10237 | Vinyl Chloride | 75-01-4 | 25 | 5 | 1 | 1.04 |
| 10237 | m+p-Xylene | 179601-23-1 | 47 | 5 | 1 | 1.04 |
| 10237 | o-Xylene | 95-47-6 | 23 | 5 | 1 | 1.04 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 19:12 | Chelsea B Stong | 1.04 |
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 19:58 | Chelsea B Stong | 1.06 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-586-SA5B-SB-3.75-4.25MS Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488100**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:03 | Mitchell R Washel | n.a. |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-586-SA5B-SB-3.75-4.25MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488101**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 150 | 21 | 8 | 1.02 |
| 10237 | Acrolein | 107-02-8 | 140 | 110 | 21 | 1.02 |
| 10237 | Acrylonitrile | 107-13-1 | 91 | 21 | 4 | 1.02 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 21 | 5 | 1 | 1.02 |
| 10237 | Benzene | 71-43-2 | 22 | 5 | 0.5 | 1.02 |
| 10237 | Bromobenzene | 108-86-1 | 22 | 5 | 1 | 1.02 |
| 10237 | Bromochloromethane | 74-97-5 | 25 | 5 | 1 | 1.02 |
| 10237 | Bromodichloromethane | 75-27-4 | 21 | 5 | 1 | 1.02 |
| 10237 | Bromoform | 75-25-2 | 19 | 5 | 1 | 1.02 |
| 10237 | Bromomethane | 74-83-9 | 24 | 5 | 2 | 1.02 |
| 10237 | 2-Butanone | 78-93-3 | 140 | 11 | 4 | 1.02 |
| 10237 | t-Butyl alcohol | 75-65-0 | 260 | 54 | 21 | 1.02 |
| 10237 | n-Butylbenzene | 104-51-8 | 21 | 5 | 1 | 1.02 |
| 10237 | sec-Butylbenzene | 135-98-8 | 22 | 5 | 1 | 1.02 |
| 10237 | tert-Butylbenzene | 98-06-6 | 23 | 5 | 1 | 1.02 |
| 10237 | Carbon Disulfide | 75-15-0 | 24 | 5 | 1 | 1.02 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 24 | 5 | 1 | 1.02 |
| 10237 | Chlorobenzene | 108-90-7 | 22 | 5 | 1 | 1.02 |
| 10237 | Chloroethane | 75-00-3 | 23 | 5 | 2 | 1.02 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 17 | 11 | 2 | 1.02 |
| 10237 | Chloroform | 67-66-3 | 23 | 5 | 1 | 1.02 |
| 10237 | 1-Chlorohexane | 544-10-5 | 21 | 5 | 1 | 1.02 |
| 10237 | Chloromethane | 74-87-3 | 24 | 5 | 2 | 1.02 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 22 | 5 | 1 | 1.02 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 22 | 5 | 1 | 1.02 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 24 | 5 | 2 | 1.05 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 19 | 5 | 2 | 1.02 |
| 10237 | Dibromochloromethane | 124-48-1 | 21 | 5 | 1 | 1.02 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 21 | 5 | 1 | 1.02 |
| 10237 | Dibromomethane | 74-95-3 | 21 | 5 | 1 | 1.02 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 22 | 5 | 1 | 1.02 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 22 | 5 | 1 | 1.02 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 22 | 5 | 1 | 1.02 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 27 | 5 | 2 | 1.02 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 22 | 5 | 1 | 1.02 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 23 | 5 | 1 | 1.02 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 26 | 5 | 1 | 1.02 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 23 | 5 | 1 | 1.02 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 24 | 5 | 1 | 1.02 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 21 | 5 | 1 | 1.02 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 20 | 5 | 1 | 1.02 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 24 | 5 | 1 | 1.02 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 24 | 5 | 1 | 1.02 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 21 | 5 | 1 | 1.02 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 21 | 5 | 1 | 1.02 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 21 | 5 | 1 | 1.02 |
| 10237 | Ethylbenzene | 100-41-4 | 23 | 5 | 1 | 1.02 |
| 10237 | Freon 113 | 76-13-1 | 24 | 5 | 2 | 1.02 |
| 10237 | Freon 133a | 75-88-7 | 29 | 5 | 2 | 1.05 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 18 | 5 | 2 | 1.02 |
| 10237 | 2-Hexanone | 591-78-6 | 87 | 11 | 3 | 1.02 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-586-SA5B-SB-3.75-4.25MSD Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7488101**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 21 | 5 | 1 | 1.02 |
| 10237 | Isopropylbenzene | 98-82-8 | 22 | 5 | 1 | 1.02 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 21 | 5 | 1 | 1.02 |
| 10237 | Methyl Iodide | 74-88-4 | 25 | 5 | 3 | 1.02 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 21 | 5 | 0.5 | 1.02 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 90 | 11 | 3 | 1.02 |
| 10237 | Methylene Chloride | 75-09-2 | 25 | 5 | 2 | 1.02 |
| 10237 | n-Propylbenzene | 103-65-1 | 23 | 5 | 1 | 1.02 |
| 10237 | Styrene | 100-42-5 | 23 | 5 | 1 | 1.02 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 22 | 5 | 1 | 1.02 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 21 | 5 | 1 | 1.02 |
| 10237 | Tetrachloroethene | 127-18-4 | 23 | 5 | 1 | 1.02 |
| 10237 | Toluene | 108-88-3 | 23 | 5 | 1 | 1.02 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 18 | 5 | 1 | 1.02 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 19 | 5 | 1 | 1.02 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 23 | 5 | 1 | 1.02 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 21 | 5 | 1 | 1.02 |
| 10237 | Trichloroethene | 79-01-6 | 23 | 5 | 1 | 1.02 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 25 | 5 | 2 | 1.02 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 22 | 5 | 1 | 1.02 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 22 | 5 | 1 | 1.02 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 23 | 5 | 1 | 1.02 |
| 10237 | Vinyl Acetate | 108-05-4 | 71 | 11 | 2 | 1.05 |
| 10237 | Vinyl Chloride | 75-01-4 | 25 | 5 | 1 | 1.02 |
| 10237 | m+p-Xylene | 179601-23-1 | 45 | 5 | 1 | 1.02 |
| 10237 | o-Xylene | 95-47-6 | 22 | 5 | 1 | 1.02 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 4.6 | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 4.5 | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 19:35 | Chelsea B Stong | 1.02 |
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 20:21 | Chelsea B Stong | 1.05 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-586-SA5B-SB-3.75-4.25MSD Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488101**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:00 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

58637 SDG#: PH216-03MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:08 | Mitchell R Washel | n.a. |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-986-SA5B-SB-3.75-4.25 Soil
SSFL Phase 3 Subarea 5B

**LL Sample # SW 7488102**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:05 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

98637 SDG#: PH216-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.04 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.04 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.04 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.04 |
| 10237 | t-Butyl alcohol | 75-65-0 | 55 | U | 55 | 22 | 1.04 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.04 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-986-SA5B-SB-3.75-4.25 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488102**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:05 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

98637 SDG#: PH216-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.04 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.04 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.04 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.04 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 20:43 | Chelsea B Stong | 1.04 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-986-SA5B-SB-3.75-4.25 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7488102**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 09:05 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

98637 SDG#: PH216-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:11 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-576-SA5A-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488103**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:15 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57625 SDG#: PH216-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 1.02 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 1.02 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 1.02 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.02 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.02 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 1.02 |
| 10237 | t-Butyl alcohol | 75-65-0 | 52 | U | 52 | 21 | 1.02 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.02 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.02 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.02 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1.02 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.02 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.02 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.02 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.02 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.02 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.02 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.02 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.02 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1.02 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-576-SA5A-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488103**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:15 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57625 SDG#: PH216-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.02 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.02 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.02 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1.02 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.02 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.02 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.02 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.02 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1.02 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.02 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.02 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.02 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 21:06 | Chelsea B Stong | 1.02 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-576-SA5A-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488103**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:15 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57625 SDG#: PH216-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:13 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-571-SA5A-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488104**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:26 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57125 SDG#: PH216-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.98 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.98 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.98 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.98 |
| 10237 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 20 | 0.98 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.98 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-571-SA5A-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488104**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:26 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57125 SDG#: PH216-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.98 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.98 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.98 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.98 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 21:29 | Chelsea B Stong | 0.98 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-571-SA5A-SB-2.5-3.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488104**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:26 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57125 SDG#: PH216-06

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:15 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-574-SA5A-SB-1.5-2.0 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7488105**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:10 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57415 SDG#: PH216-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.08 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.08 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.08 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 1.08 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 1.08 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.08 |
| 10237 | t-Butyl alcohol | 75-65-0 | 56 | U | 56 | 22 | 1.08 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 1.08 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 1.08 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 1.08 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.08 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 1.08 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 1.08 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 1.08 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 1.08 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 1.08 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 1.08 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 1.08 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 1.08 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.08 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-574-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488105**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:10 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57415 SDG#: PH216-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 1.08 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 3 | 1.08 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 1.08 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.08 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 1.08 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 1.08 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 1.08 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 1.08 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.08 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 1.08 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 1.08 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 1.08 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.8 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 21:51 | Chelsea B Stong | 1.08 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-574-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488105**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:10 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57415 SDG#: PH216-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:17 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-566-SA5A-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488106**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 13:15 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56630 SDG#: PH216-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.03 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.03 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.03 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 1.03 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 1.03 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.03 |
| 10237 | t-Butyl alcohol | 75-65-0 | 56 | U | 56 | 22 | 1.03 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 1.03 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 1.03 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 1.03 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.03 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 1.03 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 1.03 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 1.03 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 1.03 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 1.03 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 1.03 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 1.03 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 1.03 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.03 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-566-SA5A-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488106**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 13:15 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56630 SDG#: PH216-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 1.03 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 3 | 1.03 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 1.03 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.03 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 1.03 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 1.03 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 1.03 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 1.03 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.03 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 1.03 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 1.03 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 1.03 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 8.4 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 22:14 | Chelsea B Stong | 1.03 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-566-SA5A-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7488106**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 13:15 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56630 SDG#: PH216-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:22 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:20 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401A | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488107**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:05 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB164 SDG#: PH216-09EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB1-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488107**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:05 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB164 SDG#: PH216-09EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141562AA | 06/05/2014 17:58 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141562AA | 06/05/2014 17:58 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488108**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:20 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB264 SDG#: PH216-10EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB2-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488108**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:20 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB264 SDG#: PH216-10EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141562AA | 06/05/2014 18:19 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141562AA | 06/05/2014 18:19 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB4-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488109**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:08 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB464 SDG#: PH216-11EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB4-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488109**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:08 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB464 SDG#: PH216-11EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141562AA | 06/05/2014 18:40 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141562AA | 06/05/2014 18:40 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB5-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488110**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:22 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB564 SDG#: PH216-12EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB5-060414 Water**
**SSFL Phase 3 Subarea 5B/5A**

**LL Sample # WW 7488110**
**LL Group # 1479554**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:22 by VV

Submitted: 06/05/2014 09:15
Reported: 06/16/2014 19:36

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB564 SDG#: PH216-12EB*

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141562AA | 06/05/2014 19:02 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141562AA | 06/05/2014 19:02 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479554
Reported: 06/16/14 at 07:36 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141612AA | Sample number(s): 7488098-7488106 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 106 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 88 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 103 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 99 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 106 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 113 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 99 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 106 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 101 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 121 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 96 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 107 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 110 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 100 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 87 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 111 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 81 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 103 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 79 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 99 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 105 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 106 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 107 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 105 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 109 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 116 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 113 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 99 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 110 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479554
Reported: 06/16/14 at 07:36 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 112 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 100 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 103 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 105 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 104 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 94 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 95 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 104 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 115 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 108 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 102 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 117 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 102 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 103 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 99 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 98 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 94 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 96 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 108 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 103 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 104 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 65 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 107 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| Batch number: Y141562AA | Sample number(s): 7488097,7488107-7488110 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 92 | 91 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 79 | 78 | 52-129 | 2 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 95 | 92 | 62-120 | 3 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 0.5 | ug/l | 93 | 93 | 75-120 | 0 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/l | 96 | 96 | 78-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 98 | 98 | 80-120 | 0 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 101 | 97 | 80-121 | 4 | 30 |
| Bromodichloromethane | 5 | U | 5. | 0.5 | ug/l | 94 | 93 | 73-120 | 1 | 30 |
| Bromoform | 5 | U | 5. | 0.5 | ug/l | 90 | 90 | 61-120 | 0 | 30 |
| Bromomethane | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 87 | 86 | 54-133 | 0 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 98 | 98 | 75-120 | 0 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 90 | 90 | 68-120 | 0 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 80-120 | 0 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 94 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 95 | 92 | 58-126 | 3 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 0.5 | ug/l | 105 | 104 | 74-130 | 1 | 30 |
| Chlorobenzene | 5 | U | 5. | 0.5 | ug/l | 97 | 97 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479554
Reported: 06/16/14 at 07:36 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 0.5 | ug/l | 97 | 93 | 56-120 | 4 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 106 | 105 | 54-126 | 2 | 30 |
| Chloroform | 5 | U | 5. | 0.5 | ug/l | 101 | 98 | 80-122 | 3 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Chloromethane | 5 | U | 5. | 0.5 | ug/l | 107 | 107 | 63-120 | 0 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 95 | 94 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 66 | 67 | 47-120 | 1 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 87 | 87 | 56-120 | 0 | 30 |
| Dibromochloromethane | 5 | U | 5. | 0.5 | ug/l | 97 | 96 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 5 | U | 5. | 0.5 | ug/l | 100 | 100 | 76-120 | 0 | 30 |
| Dibromomethane | 5 | U | 5. | 0.5 | ug/l | 96 | 94 | 80-120 | 2 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 95 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | 5 | U | 5. | 0.5 | ug/l | 110 | 107 | 48-132 | 3 | 30 |
| 1,1-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 94 | 93 | 80-120 | 2 | 30 |
| 1,2-Dichloroethane | 5 | U | 5. | 0.5 | ug/l | 102 | 101 | 65-135 | 1 | 30 |
| 1,1-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 111 | 110 | 76-124 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 99 | 97 | 80-120 | 3 | 30 |
| trans-1,2-Dichloroethene | 5 | U | 5. | 0.5 | ug/l | 114 | 113 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 93 | 92 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 92 | 92 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 5 | U | 5. | 0.5 | ug/l | 98 | 97 | 67-124 | 2 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 101 | 101 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 92 | 91 | 80-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 0.5 | ug/l | 92 | 91 | 76-120 | 1 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 0.5 | ug/l | 94 | 93 | 74-120 | 1 | 30 |
| Ethylbenzene | 5 | U | 5. | 0.5 | ug/l | 95 | 95 | 79-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/l | 99 | 98 | 67-127 | 0 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 106 | 106 | 46-152 | 0 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 90 | 91 | 51-125 | 1 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 86 | 86 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 0.5 | ug/l | 93 | 94 | 65-120 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 97 | 77-120 | 0 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| Methyl Iodide | 5 | U | 5. | 0.5 | ug/l | 110 | 108 | 75-128 | 2 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 88 | 87 | 51-124 | 1 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/l | 109 | 108 | 80-120 | 1 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 80-120 | 1 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 99 | 99 | 80-120 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 0.5 | ug/l | 89 | 88 | 70-120 | 1 | 30 |
| Tetrachloroethene | 5 | U | 5. | 0.5 | ug/l | 103 | 100 | 80-120 | 2 | 30 |
| Toluene | 5 | U | 5. | 0.5 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 91 | 91 | 58-126 | 0 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 94 | 65-120 | 0 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 90 | 88 | 66-126 | 2 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 0.5 | ug/l | 95 | 94 | 80-120 | 0 | 30 |
| Trichloroethene | 5 | U | 5. | 0.5 | ug/l | 101 | 99 | 80-120 | 2 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 0.5 | ug/l | 107 | 103 | 65-130 | 3 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 93 | 95 | 76-120 | 2 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 96 | 74-120 | 0 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 97 | 96 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 69 | 68 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479554
Reported: 06/16/14 at 07:36 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 0.5 | ug/l | 106 | 105 | 63-120 | 1 | 30 |
| m+p-Xylene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 1 | 30 |
| o-Xylene | 5 | U | 5. | 0.5 | ug/l | 96 | 95 | 80-120 | 1 | 30 |
| Batch number: 14162162401A | Sample number(s): 7488098-7488106 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141612AA | Sample number(s): 7488098-7488106 UNSPK: 7488099 | | | | | | | | |
| Acetone | 89 | 96 | 31-195 | 6 | 30 | | | | |
| Acrolein | 85 | 89 | 10-165 | 4 | 30 | | | | |
| Acrylonitrile | 87 | 85 | 48-139 | 4 | 30 | | | | |
| t-Amyl methyl ether | 94 | 97 | 50-132 | 2 | 30 | | | | |
| Benzene | 105 | 105 | 55-143 | 1 | 30 | | | | |
| Bromobenzene | 103 | 103 | 43-139 | 1 | 30 | | | | |
| Bromochloromethane | 124 | 115 | 60-137 | 9 | 30 | | | | |
| Bromodichloromethane | 97 | 97 | 53-136 | 1 | 30 | | | | |
| Bromoform | 93 | 91 | 50-144 | 4 | 30 | | | | |
| Bromomethane | 111 | 112 | 42-168 | 0 | 30 | | | | |
| 2-Butanone | 81 | 86 | 37-163 | 4 | 30 | | | | |
| t-Butyl alcohol | 126 | 123 | 47-153 | 4 | 30 | | | | |
| n-Butylbenzene | 97 | 99 | 30-146 | 1 | 30 | | | | |
| sec-Butylbenzene | 103 | 104 | 33-157 | 1 | 30 | | | | |
| tert-Butylbenzene | 105 | 107 | 41-152 | 0 | 30 | | | | |
| Carbon Disulfide | 112 | 111 | 48-146 | 2 | 30 | | | | |
| Carbon Tetrachloride | 114 | 114 | 51-165 | 1 | 30 | | | | |
| Chlorobenzene | 105 | 103 | 49-135 | 3 | 30 | | | | |
| Chloroethane | 107 | 106 | 39-152 | 3 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 70 | 78 | 32-139 | 9 | 30 | | | | |
| Chloroform | 108 | 108 | 61-142 | 1 | 30 | | | | |
| 1-Chlorohexane | 94 | 98 | 70-130 | 2 | 30 | | | | |
| Chloromethane | 109 | 112 | 36-143 | 1 | 30 | | | | |
| 2-Chlorotoluene | 104 | 103 | 42-146 | 2 | 30 | | | | |
| 4-Chlorotoluene | 105 | 105 | 39-145 | 2 | 30 | | | | |
| Chlorotrifluoroethene | 91 | 108 | 70-130 | 16 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 85 | 88 | 34-165 | 1 | 30 | | | | |
| Dibromochloromethane | 105 | 98 | 51-128 | 8 | 30 | | | | |
| 1,2-Dibromoethane | 100 | 99 | 54-129 | 2 | 30 | | | | |
| Dibromomethane | 94 | 98 | 57-130 | 2 | 30 | | | | |
| 1,2-Dichlorobenzene | 97 | 100 | 36-133 | 2 | 30 | | | | |
| 1,3-Dichlorobenzene | 101 | 103 | 34-134 | 1 | 30 | | | | |
| 1,4-Dichlorobenzene | 101 | 101 | 35-136 | 1 | 30 | | | | |
| Dichlorodifluoromethane | 123 | 123 | 26-151 | 1 | 30 | | | | |
| 1,1-Dichloroethane | 103 | 103 | 63-142 | 1 | 30 | | | | |
| 1,2-Dichloroethane | 103 | 106 | 54-143 | 2 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479554
Reported: 06/16/14 at 07:36 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 121 | 119 | 61-149 | 3 | 30 | | | | |
| cis-1,2-Dichloroethene | 106 | 108 | 67-135 | 0 | 30 | | | | |
| trans-1,2-Dichloroethene | 120 | 112 | 64-144 | 8 | 30 | | | | |
| 1,2-Dichloropropane | 98 | 98 | 54-144 | 1 | 30 | | | | |
| 1,3-Dichloropropane | 96 | 95 | 51-140 | 2 | 30 | | | | |
| 2,2-Dichloropropane | 109 | 111 | 53-147 | 0 | 30 | | | | |
| 1,1-Dichloropropene | 113 | 114 | 54-145 | 1 | 30 | | | | |
| cis-1,3-Dichloropropene | 94 | 96 | 45-137 | 1 | 30 | | | | |
| trans-1,3-Dichloropropene | 100 | 98 | 51-134 | 3 | 30 | | | | |
| Ethyl t-butyl ether | 95 | 97 | 58-124 | 1 | 30 | | | | |
| Ethylbenzene | 109 | 106 | 44-141 | 4 | 30 | | | | |
| Freon 113 | 114 | 111 | 56-156 | 4 | 30 | | | | |
| Freon 133a | 111 | 132* | 61-131 | 17 | 30 | | | | |
| Hexachlorobutadiene | 90 | 84 | 10-155 | 8 | 30 | | | | |
| 2-Hexanone | 80 | 81 | 32-160 | 0 | 30 | | | | |
| di-Isopropyl ether | 98 | 99 | 59-133 | 0 | 30 | | | | |
| Isopropylbenzene | 106 | 103 | 38-144 | 4 | 30 | | | | |
| p-Isopropyltoluene | 102 | 98 | 29-152 | 5 | 30 | | | | |
| Methyl Iodide | 116 | 115 | 52-139 | 2 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 98 | 99 | 55-129 | 0 | 30 | | | | |
| 4-Methyl-2-pentanone | 80 | 84 | 46-139 | 4 | 30 | | | | |
| Methylene Chloride | 112 | 117 | 60-149 | 4 | 30 | | | | |
| n-Propylbenzene | 106 | 107 | 39-157 | 0 | 30 | | | | |
| Styrene | 104 | 107 | 35-134 | 2 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 106 | 104 | 55-139 | 3 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 90 | 95 | 29-182 | 4 | 30 | | | | |
| Tetrachloroethene | 109 | 107 | 42-149 | 4 | 30 | | | | |
| Toluene | 110 | 106 | 50-146 | 4 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 79 | 85 | 10-140 | 6 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 85 | 88 | 10-136 | 2 | 30 | | | | |
| 1,1,1-Trichloroethane | 106 | 106 | 52-146 | 1 | 30 | | | | |
| 1,1,2-Trichloroethane | 102 | 99 | 58-152 | 4 | 30 | | | | |
| Trichloroethene | 107 | 107 | 53-144 | 1 | 30 | | | | |
| Trichlorofluoromethane | 117 | 117 | 47-163 | 0 | 30 | | | | |
| 1,2,3-Trichloropropane | 98 | 102 | 36-180 | 3 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 106 | 104 | 37-149 | 3 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 105 | 106 | 38-150 | 0 | 30 | | | | |
| Vinyl Acetate | 55 | 64 | 21-139 | 16 | 30 | | | | |
| Vinyl Chloride | 114 | 117 | 50-154 | 1 | 30 | | | | |
| m+p-Xylene | 109 | 106 | 44-137 | 4 | 30 | | | | |
| o-Xylene | 105 | 102 | 42-137 | 4 | 30 | | | | |
| Batch number: 14162162401A | Sample number(s): 7488098-7488106 | | | | | BKG: 7488099 | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 4.5 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 4.5 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 4.6 | 4.5 | 3 | 20 |

## Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479554
Reported: 06/16/14 at 07:36 PM

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141612AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7488098 | 106 | 108 | 100 | 98 |
| 7488099 | 104 | 100 | 99 | 94 |
| 7488100 | 101 | 100 | 104 | 101 |
| 7488101 | 102 | 99 | 102 | 99 |
| 7488102 | 104 | 101 | 100 | 93 |
| 7488103 | 104 | 101 | 99 | 95 |
| 7488104 | 105 | 102 | 98 | 95 |
| 7488105 | 105 | 104 | 102 | 91 |
| 7488106 | 105 | 99 | 98 | 93 |
| Blank | 104 | 104 | 100 | 96 |
| LCS | 108 | 113 | 103 | 103 |
| MS | 101 | 100 | 104 | 101 |
| MSD | 102 | 99 | 102 | 99 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141562AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7488097 | 101 | 100 | 96 | 93 |
| 7488107 | 100 | 99 | 97 | 95 |
| 7488108 | 101 | 99 | 97 | 94 |
| 7488109 | 102 | 99 | 96 | 94 |
| 7488110 | 103 | 99 | 96 | 94 |
| Blank | 100 | 98 | 97 | 95 |
| LCS | 100 | 98 | 97 | 98 |
| LCSD | 99 | 100 | 98 | 99 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/4/2014
CarrierName: FedEx
AirbillNo: 770197160010

A-13013
G-1479554
S-7488097-110

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140604-04
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB3-060414 | 6/4/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-577-SA5B-SB-5.3-5.8 | 6/4/14 08:40 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-577-SA5B-SB-5.3-5.8 | 6/4/14 08:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-586-SA5B-SB-3.75-4.25MS | 6/4/14 09:00 | SO | None | 9 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | MS/MSD |
| SVL-586-SA5B-SB-3.75-4.25MS | 6/4/14 09:00 | SO | None | 1 - 8 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture. MS/MSD |
| SVL-986-SA5B-SB-3.75-4.25 | 6/4/14 09:05 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-986-SA5B-SB-3.75-4.25 | 6/4/14 09:05 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-576-SA5A-SB-2.5-3.0 | 6/4/14 10:15 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-576-SA5A-SB-2.5-3.0 | 6/4/14 10:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-571-SA5A-SB-2.5-3.0 | 6/4/14 11:26 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-571-SA5A-SB-2.5-3.0 | 6/4/14 11:26 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-574-SA5A-SB-1.5-2.0 | 6/4/14 11:10 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-574-SA5A-SB-1.5-2.0 | 6/4/14 11:10 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-566-SA5A-SB-3.0-3.5 | 6/4/14 13:15 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-566-SA5A-SB-3.0-3.5 | 6/4/14 13:15 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Van Vanden Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 06/04/14 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 6.5.14 | 915 |

COC Rev 4 Soil Vapor 1of2



COC: 20140604-04, Page 1 of 1 1of1

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/4/2014
CarrierName: FedEx
AirbillNo: 770197160010

A - 13013
G - 1479554
S - 7488097-110

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140604-05
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB1-060414 | 6/4/14 07:05 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB2-060414 | 6/4/14 07:20 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB4-060414 | 6/4/14 07:08 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| EB5-060414 | 6/4/14 07:22 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Van Vathanan Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 06/04/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 6.5.14 | 915 |

Soil Vapor 2 of 2

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16484

Group Number(s): 1479554

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/05/2014 9:15 |
| Number of Packages: | 4 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 11:15 on 06/05/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |
| 3 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/05/2014
Group Number: 1479557
SDG: PH217
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| EB3-060414 Water | 7488113 |
| TB2-060414 Water | 7488114 |
| SL-655-SA5C-TR-0.5 Soil | 7488115 |
| SL-655-SA5C-TR-5.0 Soil | 7488116 |
| SL-646-SA5C-TR-0.5 Soil | 7488117 |
| SL-646-SA5C-TR-5.0 Soil | 7488118 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | Acenaphthene | 83-32-9 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Acenaphthylene | 208-96-8 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Aniline | 62-53-3 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | Anthracene | 120-12-7 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Benzidine | 92-87-5 | 69 | U | 69 | 23 | | 1 |
| 10461 | Benzo(a)anthracene | 56-55-3 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Benzo(a)pyrene | 50-32-8 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Benzo(b)fluoranthene | 205-99-2 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Benzo(g,h,i)perylene | 191-24-2 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Benzo(k)fluoranthene | 207-08-9 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Benzoic acid | 65-85-0 | 17 | U | 17 | 7 | | 1 |
| 10461 | Benzyl alcohol | 100-51-6 | 17 | U | 17 | 11 | | 1 |
| 10461 | 1,1'-Biphenyl | 92-52-4 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 4-Bromophenyl-phenylether | 101-55-3 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | Butylbenzylphthalate | 85-68-7 | 6 | U | 6 | 2 | | 1 |
| 10461 | Di-n-butylphthalate | 84-74-2 | 6 | U | 6 | 2 | | 1 |
| 10461 | Carbazole | 86-74-8 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 4-Chloro-3-methylphenol | 59-50-7 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 4-Chloroaniline | 106-47-8 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | bis(2-Chloroethoxy)methane | 111-91-1 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | bis(2-Chloroethyl)ether | 111-44-4 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 1 | U | 1 | 0.6 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Chloronaphthalene | 91-58-7 | 1 | U | 1 | 0.5 | | 1 |
| 10461 | 2-Chlorophenol | 95-57-8 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 4-Chlorophenyl-phenylether | 7005-72-3 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | Chrysene | 218-01-9 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Dibenz(a,h)anthracene | 53-70-3 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Dibenzofuran | 132-64-9 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 1,2-Dichlorobenzene | 95-50-1 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 1,3-Dichlorobenzene | 541-73-1 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 1,4-Dichlorobenzene | 106-46-7 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 3,3'-Dichlorobenzidine | 91-94-1 | 6 | U | 6 | 2 | | 1 |
| 10461 | 2,4-Dichlorophenol | 120-83-2 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 2,6-Dichlorophenol | 87-65-0 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | Diethylphthalate | 84-66-2 | 6 | U | 6 | 2 | | 1 |
| 10461 | 2,4-Dimethylphenol | 105-67-9 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 3,5-Dimethylphenol | 108-68-9 | 11 | U | 11 | 3 | | 1 |
| 10461 | Dimethylphthalate | 131-11-3 | 6 | U | 6 | 2 | | 1 |
| 10461 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 17 | U | 17 | 6 | | 1 |
| 10461 | 2,4-Dinitrophenol | 51-28-5 | 34 | U | 34 | 11 | | 1 |
| 10461 | 1,2-Diphenylhydrazine | 122-66-7 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | bis(2-Ethylhexyl)phthalate | 117-81-7 | 6 | U | 6 | 2 | | 1 |
| 10461 | Fluoranthene | 206-44-0 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Fluorene | 86-73-7 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Hexachlorobenzene | 118-74-1 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Hexachlorobutadiene | 87-68-3 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | Hexachlorocyclopentadiene | 77-47-4 | 17 | U | 17 | 6 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | ug/l | | ug/l | ug/l | ug/l | |
| 10461 | Hexachloroethane | 67-72-1 | 6 | U | 6 | 1 | | 1 |
| 10461 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Isophorone | 78-59-1 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 1-Methylnaphthalene | 90-12-0 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | 2-Methylnaphthalene | 91-57-6 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | 2-Methylphenol | 95-48-7 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 4-Methylphenol | 106-44-5 | 1 | U | 1 | 0.6 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10461 | Naphthalene | 91-20-3 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | NDPA as diphenylamine | n.a. | 6 | U | 6 | 2 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | 2-Nitroaniline | 88-74-4 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 3-Nitroaniline | 99-09-2 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 4-Nitroaniline | 100-01-6 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | Nitrobenzene | 98-95-3 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 2-Nitrophenol | 88-75-5 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 4-Nitrophenol | 100-02-7 | 34 | U | 34 | 11 | | 1 |
| 10461 | N-Nitrosodimethylamine | 62-75-9 | 6 | U | 6 | 2 | | 1 |
| 10461 | N-Nitroso-di-n-propylamine | 621-64-7 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | N-Nitrosodiphenylamine | 86-30-6 | 1 | U | 1 | 0.6 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10461 | Di-n-octylphthalate | 117-84-0 | 6 | U | 6 | 2 | | 1 |
| 10461 | Pentachlorophenol | 87-86-5 | 6 | U | 6 | 1 | | 1 |
| 10461 | Phenanthrene | 85-01-8 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Phenol | 108-95-2 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | Pyrene | 129-00-0 | 0.6 | U | 0.6 | 0.1 | | 1 |
| 10461 | Pyridine | 110-86-1 | 6 | U | 6 | 2 | | 1 |
| 10461 | 1,2,4-Trichlorobenzene | 120-82-1 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 2,4,5-Trichlorophenol | 95-95-4 | 1 | U | 1 | 0.6 | | 1 |
| 10461 | 2,4,6-Trichlorophenol | 88-06-2 | 1 | U | 1 | 0.6 | | 1 |
| | The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials. | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Anthracene | 120-12-7 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.057 | U | 0.057 | 0.011 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.057 | | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.14 | J | 1.1 | 0.057 | | 1 |
| 12971 | Chrysene | 218-01-9 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.078 | J | 1.1 | 0.057 | | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.057 | | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 0.13 | J | 1.1 | 0.057 | | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Fluorene | 86-73-7 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.020 | J | 0.057 | 0.011 | | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.028 | J | 0.057 | 0.011 | | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.073 | | 0.057 | 0.034 | | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.057 | U | 0.057 | 0.011 | | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.057 | | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.057 | U | 0.057 | 0.034 | | 1 |
| 12971 | Pyrene | 129-00-0 | 0.057 | U | 0.057 | 0.011 | | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is again outside of the acceptance limits. All results are reported from the first trial. Similar results were obtained in both trials.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |
| **Explosives** | **SW-846 8330A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10131 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 0.60 | U | 0.60 | 0.30 | 10000000 | 1 |
| 10131 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 1,3-Dinitrobenzene | 99-65-0 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4-Dinitrotoluene | 121-14-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,6-Dinitrotoluene | 606-20-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | HMX | 2691-41-0 | 2.0 | U | 2.0 | 0.65 | 10000000 | 1 |
| 10131 | Nitrobenzene | 98-95-3 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |

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**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Explosives** | **SW-846 8330A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10131 | Nitroglycerin | 55-63-0 | 15 | U | 15 | 5.2 | 10000000 | 1 |
| 10131 | 2-Nitrotoluene | 88-72-2 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 3-Nitrotoluene | 99-08-1 | 1.2 | U | 1.2 | 0.40 | 10000000 | 1 |
| 10131 | 4-Nitrotoluene | 99-99-0 | 1.2 | U | 1.2 | 0.60 | 10000000 | 1 |
| 10131 | PETN | 78-11-5 | 18 | U | 18 | 6.0 | 10000000 | 1 |
| 10131 | RDX | 121-82-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | Tetryl | 479-45-8 | 0.60 | U | 0.60 | 0.40 | 10000000 | 1 |
| 10131 | 1,3,5-Trinitrobenzene | 99-35-4 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| 10131 | 2,4,6-Trinitrotoluene | 118-96-7 | 0.60 | U | 0.60 | 0.20 | 10000000 | 1 |
| **Herbicides** | **SW-846 8151A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10407 | 2,4-D | 94-75-7 | 0.48 | U | 0.48 | 0.15 | | 1 |
| 10407 | Dalapon | 75-99-0 | 1.2 | U | 1.2 | 0.24 | | 1 |
| 10407 | 2,4-DB | 94-82-6 | 0.96 | U | 0.96 | 0.29 | | 1 |
| 10407 | Dicamba | 1918-00-9 | 0.29 | U | 0.29 | 0.077 | | 1 |
| 10407 | Dinoseb | 88-85-7 | 0.48 | U | 0.48 | 0.12 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10407 | 2,4-DP (Dichlorprop) | 120-36-5 | 0.48 | U | 0.48 | 0.15 | | 1 |
| 10407 | MCPA | 94-74-6 | 190 | U | 190 | 48 | | 1 |
| 10407 | MCPP | 93-65-2 | 190 | U | 190 | 48 | | 1 |
| 10407 | 2,4,5-T | 93-76-5 | 0.048 | U | 0.048 | 0.014 | | 1 |
| 10407 | 2,4,5-TP | 93-72-1 | 0.048 | U | 0.048 | 0.0096 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 06386 | 6b Perchlorate (Method 6850) | 14797-73-0 | 1.0 | U | 1.0 | 0.20 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Aldrin | 309-00-2 | 0.0083 | U | 0.0083 | 0.0017 | | 1 |
| 10589 | Alpha BHC | 319-84-6 | 0.0083 | U | 0.0083 | 0.0025 | | 1 |
| 10589 | Beta BHC | 319-85-7 | 0.0083 | U | 0.0083 | 0.0028 | | 1 |
| 10589 | Gamma BHC - Lindane | 58-89-9 | 0.0083 | U | 0.0083 | 0.0017 | | 1 |
| 10589 | Chlordane | 57-74-9 | 0.42 | U | 0.42 | 0.13 | | 1 |
| 10589 | p,p-DDD | 72-54-8 | 0.017 | U | 0.017 | 0.0042 | | 1 |
| 10589 | p,p-DDE | 72-55-9 | 0.017 | U | 0.017 | 0.0042 | | 1 |
| 10589 | p,p-DDT | 50-29-3 | 0.017 | U | 0.017 | 0.0043 | | 1 |
| 10589 | Delta BHC | 319-86-8 | 0.0083 | U | 0.0083 | 0.0028 | | 1 |
| 10589 | Dieldrin | 60-57-1 | 0.017 | U | 0.017 | 0.0044 | | 1 |
| 10589 | Endosulfan I | 959-98-8 | 0.0083 | U | 0.0083 | 0.0036 | | 1 |
| 10589 | Endosulfan II | 33213-65-9 | 0.017 | U | 0.017 | 0.013 | | 1 |
| 10589 | Endosulfan Sulfate | 1031-07-8 | 0.017 | U | 0.017 | 0.0048 | | 1 |

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**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 10589 | Endrin | 72-20-8 | 0.017 | U | 0.017 | 0.0068 | | 1 |
| 10589 | Endrin Aldehyde | 7421-93-4 | 0.083 | U | 0.083 | 0.017 | | 1 |
| 10589 | Endrin Ketone | 53494-70-5 | 0.017 | U | 0.017 | 0.0042 | | 1 |
| 10589 | Heptachlor | 76-44-8 | 0.0083 | U | 0.0083 | 0.0017 | | 1 |
| 10589 | Heptachlor Epoxide | 1024-57-3 | 0.0083 | U | 0.0083 | 0.0019 | | 1 |
| 10589 | Methoxychlor | 72-43-5 | 0.083 | U | 0.083 | 0.025 | | 1 |
| 10589 | Mirex | 2385-85-5 | 0.042 | U | 0.042 | 0.0083 | | 1 |
| 10589 | Toxaphene | 8001-35-2 | 0.83 | U | 0.83 | 0.25 | | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: Aldrin | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/l** | | **ug/l** | **ug/l** | **ug/l** | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.092 | | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.083 | | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.13 | | 1 |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 12926 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Propylene glycol | 57-55-6 | 10 | U | 10 | 8.0 | | 1 |
| 12926 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 8.0 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10319 | m-Terphenyl | 92-06-8 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| 10319 | o-Terphenyl | 84-15-1 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| 10319 | p-Terphenyl | 92-94-4 | 0.0048 | U | 0.0048 | 0.0019 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.48 | U | 0.48 | 0.097 | | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.48 | U | 0.48 | 0.097 | | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.097 | U | 0.097 | 0.048 | | 1 |
| | The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial. The reverse surrogate, capric acid, is present at <1%. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 | U | 0.400 | 0.0828 | | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 | U | 0.0400 | 0.0053 | | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 | U | 0.0400 | 0.0068 | | 1 |
| 07046 | Barium | 7440-39-3 | 0.00070 | J | 0.0100 | 0.00033 | | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 | U | 0.0100 | 0.00067 | | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 | U | 0.100 | 0.0084 | | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 | U | 0.0100 | 0.00076 | | 1 |
| 01750 | Calcium | 7440-70-2 | 0.151 | J | 0.400 | 0.0334 | | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 | U | 0.0300 | 0.0016 | | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 | U | 0.0100 | 0.0013 | | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 | U | 0.0200 | 0.0027 | | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 | U | 0.400 | 0.0430 | | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 | U | 0.0300 | 0.0047 | | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 | U | 0.0400 | 0.0047 | | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 | U | 0.200 | 0.0167 | | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0016 | J | 0.0100 | 0.00083 | | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 | U | 0.0200 | 0.0017 | | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 | U | 0.0200 | 0.0015 | | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 | U | 0.200 | 0.0418 | | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 | U | 1.00 | 0.0980 | | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 | U | 2.00 | 0.167 | | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 | U | 0.0400 | 0.0029 | | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 | U | 0.0200 | 0.0017 | | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 | U | 0.0100 | 0.0020 | | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 | U | 0.0400 | 0.0020 | | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.0113 | J | 0.100 | 0.0084 | | 1 |
| | **SW-846 6020A** | | **mg/l** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 | U | 0.0040 | 0.00050 | | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 | U | 0.0010 | 0.00011 | | 1 |
| 06044 | Strontium | 7440-24-6 | 0.00069 | J | 0.0020 | 0.00034 | | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 | U | 0.0010 | 0.00015 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **ug/l** | **ug/l** | **ug/l** | **ug/l** | |
| 06467 | 2b Chromium VI by EPA 7199 | 18540-29-9 | 10.0 U | 10.0 | 5.0 | | 1 |
| | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.4 | 0.010 | 0.010 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | 2378-TCDD | 1746-01-6 | 0.262 | JQ | 1.91 | 0.169 | | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.331 | JB | 9.57 | 0.187 | | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 0.209 | JBQ | 9.57 | 0.148 | | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 0.313 | JQ | 9.57 | 0.149 | | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 9.57 | U | 9.57 | 0.151 | | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.541 | JBQ | 9.57 | 0.159 | | 1 |
| 10915 | OCDD | 3268-87-9 | 2.25 | JB | 19.1 | 0.216 | | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.91 | U | 1.91 | 0.143 | | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.647 | JBQ | 9.57 | 0.0998 | | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 0.375 | JB | 9.57 | 0.0997 | | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.549 | JBQ | 9.57 | 0.104 | | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.379 | JBQ | 9.57 | 0.0955 | | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.423 | JB | 9.57 | 0.0984 | | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.388 | JB | 9.57 | 0.0999 | | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.539 | JBQ | 9.57 | 0.0657 | | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.408 | JBQ | 9.57 | 0.0940 | | 1 |
| 10915 | OCDF | 39001-02-0 | 1.21 | JBQ | 19.1 | 0.237 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | pg/l | | pg/l | pg/l | pg/l | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.525 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 91 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 77 | 23 - 140 |
| 13C12-OCDD | 60 | 17 - 157 |
| 13C12-2378-TCDF | 84 | 24 - 169 |
| 13C12-12378-PeCDF | 91 | 24 - 185 |
| 13C12-23478-PeCDF | 87 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 91 | 26 - 123 |
| 13C12-234678-HxCDF | 86 | 28 - 136 |
| 13C12-123789-HxCDF | 99 | 29 - 147 |
| 13C12-1234678-HpCDF | 85 | 28 - 143 |
| 13C12-1234789-HpCDF | 67 | 26 - 138 |
| 13C12-OCDF | 55 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10461 | 8b SVOCs by EPA 8270D | SW-846 8270D | 1 | 14161WAI026 | 06/18/2014 01:25 | Catherine E Bachman | 1 |
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14161WAH026 | 06/12/2014 06:16 | Brian K Graham | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14161WAH026 | 06/11/2014 09:30 | David S Schrum | 1 |
| 11010 | 8270D BNA Extraction | SW-846 3510C | 1 | 14161WAI026 | 06/11/2014 09:30 | David S Schrum | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14157A94A | 06/09/2014 13:35 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14157A94A | 06/09/2014 13:35 | Marie D Beamenderfer | 1 |
| 10131 | 18b Energetics by 8330A | SW-846 8330A | 1 | 141610009A | 06/12/2014 03:31 | James H Place | 1 |
| 10407 | 24b Herbicides by EPA 8151A | SW-846 8151A | 1 | 141600003A | 06/11/2014 08:33 | Lisa A Reinert | 1 |
| 06386 | 6b Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141600002A | 06/11/2014 13:19 | Richard A Shober | 1 |
| 10589 | 22b Pesticides by EPA 8081B | SW-846 8081B | 1 | 141610004A | 06/11/2014 11:56 | Jamie L Brillhart | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610003A | 06/11/2014 05:52 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141610003A | 06/10/2014 16:00 | Seth A Farrier | 1 |
| 11120 | Pesticide Waters Update IV Ext | SW-846 3510C | 1 | 141610004A | 06/10/2014 16:00 | Seth A Farrier | 1 |
| 00816 | Water Sample Herbicide Extract | SW-846 8151A | 1 | 141600003A | 06/09/2014 13:50 | Kelli M Barto | 1 |
| 11122 | Energetics Extraction | SW-846 8330 | 1 | 141610009A | 06/11/2014 07:00 | Kerrie A Freeburn | 1 |
| 12926 | 20b Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141600045A | 06/09/2014 18:25 | Tyler O Griffin | 1 |
| 10319 | 23b Terphenyls by 8015B | SW-846 8015B | 1 | 141600016A | 06/10/2014 19:16 | Glorines Suarez-Rivera | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600042A | 06/11/2014 15:12 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141600043A | 06/13/2014 04:42 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141600043A | 06/10/2014 09:30 | David S Schrum | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141600042A | 06/10/2014 09:30 | David S Schrum | 1 |
| 10304 | Terphenyls water prep | SW-846 3510C | 1 | 141600016A | 06/09/2014 22:00 | Elaine F Stoltzfus | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14162001 | 06/13/2014 04:50 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14162001 | 06/11/2014 10:30 | Ginelle L McQuaid | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: EB3-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488113**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 10:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB364 SDG#: PH217-01EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07035 | Arsenic | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07071 | Vanadium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:45 | John P Hook | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141640639001B | 06/17/2014 04:28 | Choon Y Tian | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141640639001A | 06/17/2014 04:28 | Choon Y Tian | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141640639001A | 06/17/2014 04:28 | Choon Y Tian | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141640639001A | 06/17/2014 04:28 | Choon Y Tian | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141645713003 | 06/17/2014 07:38 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141640635001 | 06/16/2014 09:40 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141640639001 | 06/16/2014 09:05 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141645713003 | 06/16/2014 11:46 | Micaela L Dishong | 1 |
| 06467 | 2b Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14156987301A | 06/05/2014 11:53 | James S Mathiot | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14156004101A | 06/05/2014 14:35 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: TB2-060414 Water**
**SSFL Phase 3 Subarea 5C**

**LL Sample # WW 7488114**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB264 SDG#: PH217-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14163A94A | 06/13/2014 12:22 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14163A94A | 06/13/2014 12:22 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 350 | U | 350 | 180 | | 1 |
| 10726 | Benzidine | 92-87-5 | 1,800 | U | 1,800 | 740 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 530 | U | 530 | 180 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 350 | U | 350 | 180 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2-butoxy-Ethanol | 111-76-2 | 180 | U | 180 | 180 | | 1 |
| | 2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 18 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 35 | U | 35 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 110 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 180 | U | 180 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 530 | U | 530 | 180 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 700 | U | 700 | 320 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 4 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 530 | U | 530 | 180 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 180 | U | 180 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 18 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 180 | U | 180 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 180 | U | 180 | 71 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 180 | U | 180 | 71 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 18 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 530 | U | 530 | 180 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 18 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 18 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2-phenoxy-Ethanol | 122-99-6 | 180 | U | 180 | 180 | | 1 |
| | 2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Pyridine | 110-86-1 | 180 | U | 180 | 71 | | 1 |
| 10726 | 1,2,3,4-Tetrahydronaphthalene | 119-64-2 | 180 | U | 180 | 35 | | 1 |
| | 1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 18 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 18 | | 1 |
| | The QC limits for 1,2,3,4-tetrahydronaphthalene are advisory. | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.6 | J | 1.8 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Morpholine | 110-91-8 | 21 | U | 21 | 21 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.4 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.8 | U | 1.8 | 0.71 | | 1 |
| 12969 | Pyrene | 129-00-0 | 13 | | 1.8 | 0.71 | | 1 |

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**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | | |
| **Explosives** | **SW-846 8330A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 320 | U | 320 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 430 | U | 430 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 430 | U | 430 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 430 | U | 430 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,100 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 320 | U | 320 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 320 | U | 320 | 270 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 320 | U | 320 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,100 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 320 | U | 320 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 320 | U | 320 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 320 | U | 320 | 110 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 320 | U | 320 | 110 | 10000000 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,3-Dinitrobenzene | | | | | | | |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 38 | U | 38 | 13 | | 1 |
| 10401 | Dalapon | 75-99-0 | 96 | U | 96 | 47 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 19 | | 18 | 6.6 | | 1 |

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**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | Dicamba | 1918-00-9 | 13 | U | 13 | 4.3 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 26 | U | 26 | 9.6 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.6 | | 1 |
| 10401 | MCPA | 94-74-6 | 2,700 | U | 2,700 | 810 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,700 | U | 2,700 | 800 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.87 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.80 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.3 | U | 5.3 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.4 | J | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.88 | U | 0.88 | 0.48 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.88 | U | 0.88 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.35 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.88 | U | 0.88 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.1 | U | 7.1 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 35 | U | 35 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 35 | U | 35 | 11 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 35 | U | 35 | 11 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 35 | U | 35 | 11 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.4 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.4 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.4 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.7 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.5 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.5 | | 1 |

For all QC parameters which are outside project defined limits,

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 11 | U | 11 | 5.3 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 11 | U | 11 | 5.3 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 11 | U | 11 | 5.3 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 11 | U | 11 | 5.3 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.51 | | 0.18 | 0.071 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.071 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.98 | | 0.18 | 0.071 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 3.5 | J | 5.3 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 5.0 | J | 11 | 4.3 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.3 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 19,000 | | 40.9 | 7.38 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.09 | U | 4.09 | 0.757 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.39 | J | 4.09 | 0.716 | | 1 |
| 06946 | Barium | 7440-39-3 | 109 | | 1.02 | 0.0338 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.743 | J | 1.02 | 0.0685 | | 1 |
| 07914 | Boron | 7440-42-8 | 8.10 | J | 10.2 | 0.859 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.301 | J | 1.02 | 0.0777 | | 1 |
| 01650 | Calcium | 7440-70-2 | 3,380 | | 20.5 | 3.42 | | 1 |
| 06951 | Chromium | 7440-47-3 | 21.8 | | 3.07 | 0.164 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.35 | | 1.02 | 0.101 | | 1 |
| 06953 | Copper | 7440-50-8 | 10.2 | | 2.05 | 0.297 | | 1 |
| 01654 | Iron | 7439-89-6 | 23,100 | | 40.9 | 3.70 | | 1 |
| 06955 | Lead | 7439-92-1 | 9.94 | | 3.07 | 0.511 | | 1 |
| 01656 | Lithium | 7439-93-2 | 20.6 | | 4.1 | 0.35 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,400 | | 10.2 | 1.71 | | 1 |
| 06958 | Manganese | 7439-96-5 | 337 | | 1.02 | 0.0849 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.466 | J | 2.05 | 0.174 | | 1 |

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**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06961 | Nickel | 7440-02-0 | 12.4 | | 2.05 | 0.133 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 244 | | 10.2 | 2.96 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,970 | | 102 | 8.53 | | 1 |
| 01667 | Sodium | 7440-23-5 | 84.0 | J | 102 | 17.1 | | 1 |
| 06969 | Tin | 7440-31-5 | 3.42 | J | 10.2 | 0.225 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,050 | | 1.02 | 0.174 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 41.3 | | 1.02 | 0.133 | | 1 |
| 06972 | Zinc | 7440-66-6 | 52.2 | | 4.09 | 0.205 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.91 | J | 5.11 | 0.859 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.306 | J | 0.409 | 0.102 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0397 | J | 0.205 | 0.0266 | | 2 |
| 06144 | Strontium | 7440-24-6 | 23.0 | | 0.409 | 0.0696 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.306 | | 0.205 | 0.0307 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0165 | U | 0.0165 | 0.0099 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.29 | J | 0.44 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.77 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.0 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

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**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

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Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0903 | J | 1.02 | 0.0227 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.152 | JB | 5.08 | 0.0301 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0708 | JQ | 5.08 | 0.0256 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.214 | JBQ | 5.08 | 0.0254 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.320 | JBQ | 5.08 | 0.0267 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 1.27 | JBQ | 5.08 | 0.0351 | | 1 |
| 11031 | OCDD | 3268-87-9 | 11.2 | B | 10.2 | 0.0323 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0773 | J | 1.02 | 0.0236 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.293 | JB | 5.08 | 0.0155 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.157 | JB | 5.08 | 0.0175 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.150 | JB | 5.08 | 0.0267 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.126 | JBQ | 5.08 | 0.0235 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.204 | JB | 5.08 | 0.0266 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0890 | JBQ | 5.08 | 0.0261 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.208 | JBQ | 5.08 | 0.0196 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0645 | JB | 5.08 | 0.0431 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.496 | JB | 10.2 | 0.0479 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.345 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 70 | 25 - 164 |
| 13C12-12378-PeCDD | 62 | 25 - 181 |
| 13C12-123478-HxCDD | 72 | 32 - 141 |
| 13C12-123678-HxCDD | 75 | 28 - 130 |
| 13C12-123789-HxCDD | 72 | 28 - 130 |
| 13C12-1234678-HpCDD | 70 | 23 - 140 |
| 13C12-OCDD | 59 | 17 - 157 |
| 13C12-2378-TCDF | 62 | 24 - 169 |
| 13C12-12378-PeCDF | 68 | 24 - 185 |
| 13C12-23478-PeCDF | 56 | 21 - 178 |
| 13C12-123478-HxCDF | 62 | 26 - 152 |
| 13C12-123678-HxCDF | 73 | 26 - 123 |
| 13C12-234678-HxCDF | 62 | 28 - 136 |
| 13C12-123789-HxCDF | 68 | 29 - 147 |
| 13C12-1234678-HpCDF | 90 | 28 - 143 |
| 13C12-1234789-HpCDF | 48 | 26 - 138 |
| 13C12-OCDF | 42 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
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3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14163SLC026 | 06/15/2014 21:43 | Holly Berry | 1 |
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 10:40 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14163SLC026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141610011A | 06/14/2014 07:44 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 04:52 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 15:33 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 19:05 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141580012A | 06/10/2014 06:43 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141580012A | 06/09/2014 02:30 | Sherry L Morrow | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141610011A | 06/11/2014 07:30 | Kerrie A Freeburn | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141620008A | 06/12/2014 16:48 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141600033A | 06/13/2014 14:58 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 18:37 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 06:30 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141600033A | 06/10/2014 10:00 | Denise L Trimby | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141620008A | 06/11/2014 18:45 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14162002 | 06/13/2014 19:40 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14162002 | 06/11/2014 11:30 | Brett M Weidman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |

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**Sample Description: SL-655-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488115**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 07:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65505 SDG#: PH217-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06944 | Antimony | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 12:28 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 08:37 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141600637001B | 06/11/2014 05:46 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141600637001A | 06/11/2014 05:46 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 05:46 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 05:46 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141600638001 | 06/11/2014 09:00 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141600637001 | 06/10/2014 11:56 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141600638001 | 06/10/2014 13:25 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 14160243201A | 06/11/2014 19:33 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14156039402A | 06/05/2014 20:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14160243201A | 06/09/2014 20:00 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 340 | U | 340 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 1,700 | U | 1,700 | 720 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 340 | U | 340 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-butoxy-Ethanol | 111-76-2 | 180 | U | 180 | 180 | | 1 |
| | 2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Carbazole | 86-74-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 34 | U | 34 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 34 | U | 34 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 340 | U | 340 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 34 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 520 | U | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 680 | U | 680 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 520 | U | 520 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 34 | | 1 |
| 10726 | Isophorone | 78-59-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 34 | U | 34 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 34 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 69 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 69 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | Nitrobenzene | 98-95-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 520 | U | 520 | 170 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 34 | U | 34 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 34 | | 1 |
| 10726 | Phenol | 108-95-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-phenoxy-Ethanol | 122-99-6 | 180 | U | 180 | 180 | | 1 |
| | 2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 69 | | 1 |
| 10726 | 1,2,3,4-Tetrahydronaphthalene | 119-64-2 | 170 | U | 170 | 34 | | 1 |
| | 1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 34 | U | 34 | 17 | | 1 |
| | The QC limits for 1,2,3,4-tetrahydronaphthalene are advisory. | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Morpholine | 110-91-8 | 21 | U | 21 | 21 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.2 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.69 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.69 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | | 23.54 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 150 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 410 | U | 410 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 130 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,3-Dinitrobenzene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 93 | U | 93 | 45 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.4 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.3 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.3 | | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.85 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.77 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | | 1 |

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**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.2 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.069 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.069 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.069 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,100 | | 39.4 | 7.09 | | 1 |
| 06944 | Antimony | 7440-36-0 | 3.94 | U | 3.94 | 0.728 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.72 | J | 3.94 | 0.689 | | 1 |
| 06946 | Barium | 7440-39-3 | 62.1 | | 0.984 | 0.0325 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.443 | J | 0.984 | 0.0659 | | 1 |
| 07914 | Boron | 7440-42-8 | 4.67 | J | 9.84 | 0.826 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.189 | J | 0.984 | 0.0748 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,350 | | 19.7 | 3.29 | | 1 |
| 06951 | Chromium | 7440-47-3 | 9.86 | | 2.95 | 0.157 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.34 | | 0.984 | 0.0974 | | 1 |
| 06953 | Copper | 7440-50-8 | 4.23 | | 1.97 | 0.285 | | 1 |
| 01654 | Iron | 7439-89-6 | 17,300 | | 39.4 | 3.56 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06955 | Lead | 7439-92-1 | 6.97 | | 2.95 | 0.492 | | 1 |
| 01656 | Lithium | 7439-93-2 | 21.8 | | 3.9 | 0.33 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 3,350 | | 9.84 | 1.64 | | 1 |
| 06958 | Manganese | 7439-96-5 | 217 | | 0.984 | 0.0817 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 1.97 | U | 1.97 | 0.167 | | 1 |
| 06961 | Nickel | 7440-02-0 | 5.42 | | 1.97 | 0.128 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 281 | | 9.84 | 2.84 | | 1 |
| 01662 | Potassium | 7440-09-7 | 2,800 | | 98.4 | 8.21 | | 1 |
| 01667 | Sodium | 7440-23-5 | 134 | | 98.4 | 16.4 | | 1 |
| 06969 | Tin | 7440-31-5 | 3.09 | J | 9.84 | 0.216 | | 1 |
| 06970 | Titanium | 7440-32-6 | 909 | | 0.984 | 0.167 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 21.2 | | 0.984 | 0.128 | | 1 |
| 06972 | Zinc | 7440-66-6 | 53.2 | | 3.94 | 0.197 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.72 | J | 4.92 | 0.826 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.261 | J | 0.394 | 0.0984 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.197 | U | 0.197 | 0.0256 | | 2 |
| 06144 | Strontium | 7440-24-6 | 14.2 | | 0.394 | 0.0669 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.265 | | 0.197 | 0.0295 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0171 | U | 0.0171 | 0.0103 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.42 | U | 0.42 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 8.57 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 22.1 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.2 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description:** SL-655-SA5C-TR-5.0 Soil
SSFL Phase 3 Subarea 5C

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0352 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.03 | U | 5.03 | 0.0268 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.03 | U | 5.03 | 0.0210 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0616 | JB | 5.03 | 0.0224 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0345 | JBQ | 5.03 | 0.0225 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.795 | JB | 5.03 | 0.0331 | | 1 |
| 11031 | OCDD | 3268-87-9 | 5.01 | JB | 10.1 | 0.0380 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.01 | U | 1.01 | 0.0283 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.0566 | JBQ | 5.03 | 0.0180 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0618 | JB | 5.03 | 0.0192 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0652 | JBQ | 5.03 | 0.0239 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0538 | JBQ | 5.03 | 0.0203 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0438 | JB | 5.03 | 0.0249 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0562 | JBQ | 5.03 | 0.0223 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.194 | JBQ | 5.03 | 0.0197 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0770 | JB | 5.03 | 0.0441 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.198 | JBQ | 10.1 | 0.0463 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0393 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 53 | 25 - 164 |
| 13C12-12378-PeCDD | 58 | 25 - 181 |
| 13C12-123478-HxCDD | 66 | 32 - 141 |
| 13C12-123678-HxCDD | 69 | 28 - 130 |
| 13C12-123789-HxCDD | 65 | 28 - 130 |
| 13C12-1234678-HpCDD | 64 | 23 - 140 |
| 13C12-OCDD | 53 | 17 - 157 |
| 13C12-2378-TCDF | 48 | 24 - 169 |
| 13C12-12378-PeCDF | 60 | 24 - 185 |
| 13C12-23478-PeCDF | 51 | 21 - 178 |
| 13C12-123478-HxCDF | 53 | 26 - 152 |
| 13C12-123678-HxCDF | 64 | 26 - 123 |
| 13C12-234678-HxCDF | 56 | 28 - 136 |
| 13C12-123789-HxCDF | 57 | 29 - 147 |
| 13C12-1234678-HpCDF | 79 | 28 - 143 |
| 13C12-1234789-HpCDF | 42 | 26 - 138 |
| 13C12-OCDF | 39 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result
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**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
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Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14163SLC026 | 06/15/2014 22:08 | Holly Berry | 1 |
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 11:32 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14163SLC026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/13/2014 19:40 | Marie D Beamenderfer | 23.54 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:27 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:27 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141610011A | 06/14/2014 09:51 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 05:19 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 16:11 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 19:19 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141580012A | 06/10/2014 08:52 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141580012A | 06/09/2014 02:30 | Sherry L Morrow | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141610011A | 06/11/2014 07:30 | Kerrie A Freeburn | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141620008A | 06/12/2014 17:03 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141600033A | 06/13/2014 14:36 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 18:58 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 06:51 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141600033A | 06/10/2014 10:00 | Denise L Trimby | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141620008A | 06/11/2014 18:45 | David V Hershey Jr | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-655-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488116**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 08:00 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

65550 SDG#: PH217-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14162002 | 06/13/2014 20:36 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14162002 | 06/11/2014 11:30 | Brett M Weidman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 12:44 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:00 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141600637001B | 06/11/2014 06:00 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:00 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:00 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:00 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141600638001 | 06/11/2014 09:10 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141600637001 | 06/10/2014 11:56 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141600638001 | 06/10/2014 13:25 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14160243201A | 06/11/2014 19:40 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14156039402A | 06/05/2014 20:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14160243201A | 06/09/2014 20:00 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 340 | U | 340 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 1,700 | U | 1,700 | 720 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 510 | U | 510 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 340 | U | 340 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-butoxy-Ethanol | 111-76-2 | 170 | U | 170 | 170 | | 1 |
| | 2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Carbazole | 86-74-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 34 | U | 34 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 34 | U | 34 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 340 | U | 340 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 34 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 510 | U | 510 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 670 | U | 670 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 17 | U | 17 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 510 | U | 510 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 34 | | 1 |
| 10726 | Isophorone | 78-59-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 34 | U | 34 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 34 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 68 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 68 | | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | Nitrobenzene | 98-95-3 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 34 | U | 34 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 510 | U | 510 | 170 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 34 | U | 34 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 34 | U | 34 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 170 | U | 170 | 34 | | 1 |
| 10726 | Phenol | 108-95-2 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2-phenoxy-Ethanol | 122-99-6 | 170 | U | 170 | 170 | | 1 |
| | 2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 68 | | 1 |
| 10726 | 1,2,3,4-Tetrahydronaphthalene | 119-64-2 | 170 | U | 170 | 34 | | 1 |
| | 1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 34 | U | 34 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 34 | U | 34 | 17 | | 1 |
| | The QC limits for 1,2,3,4-tetrahydronaphthalene are advisory. | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.4 | J | 1.7 | 0.68 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Chrysene | 218-01-9 | 0.72 | J | 1.7 | 0.34 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Morpholine | 110-91-8 | 20 | U | 20 | 20 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.68 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | | |
| **Explosives** | **SW-846 8330A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 150 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 410 | U | 410 | 200 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 410 | U | 410 | 200 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 410 | U | 410 | 200 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,000 | U | 2,000 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 200 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 200 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,000 | U | 2,000 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 130 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,3-Dinitrobenzene | | | | | | | |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | | 1 |
| 10401 | Dalapon | 75-99-0 | 92 | U | 92 | 45 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 15 | J | 17 | 6.3 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.2 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 770 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.77 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.1 | U | 5.1 | 2.1 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10590 | Aldrin | 309-00-2 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.7 | U | 1.7 | 0.49 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.85 | U | 0.85 | 0.46 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.85 | U | 0.85 | 0.22 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.7 | U | 1.7 | 0.34 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.85 | U | 0.85 | 0.17 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.9 | U | 6.9 | 1.7 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 7.5 | J | 17 | 4.0 | | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.1 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.1 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.17 | U | 0.17 | 0.068 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.17 | U | 0.17 | 0.068 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.17 | U | 0.17 | 0.068 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 5.6 | | 5.1 | 2.0 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | | 10 | 4.1 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,900 | | 39.0 | 7.02 | | 1 |
| 06944 | Antimony | 7440-36-0 | 3.90 | U | 3.90 | 0.721 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 2.19 | J | 3.90 | 0.682 | | 1 |
| 06946 | Barium | 7440-39-3 | 88.9 | | 0.974 | 0.0321 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.518 | J | 0.974 | 0.0652 | | 1 |
| 07914 | Boron | 7440-42-8 | 4.90 | J | 9.74 | 0.818 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.228 | J | 0.974 | 0.0740 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,790 | | 19.5 | 3.25 | | 1 |
| 06951 | Chromium | 7440-47-3 | 17.3 | | 2.92 | 0.156 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 4.99 | | 0.974 | 0.0964 | | 1 |
| 06953 | Copper | 7440-50-8 | 7.46 | | 1.95 | 0.282 | | 1 |
| 01654 | Iron | 7439-89-6 | 21,100 | | 39.0 | 3.53 | | 1 |
| 06955 | Lead | 7439-92-1 | 9.58 | | 2.92 | 0.487 | | 1 |
| 01656 | Lithium | 7439-93-2 | 23.2 | | 3.9 | 0.33 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,760 | | 9.74 | 1.63 | | 1 |
| 06958 | Manganese | 7439-96-5 | 277 | | 0.974 | 0.0808 | | 1 |

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**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06960 | Molybdenum | 7439-98-7 | 0.205 | J | 1.95 | 0.166 | | 1 |
| 06961 | Nickel | 7440-02-0 | 9.58 | | 1.95 | 0.127 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 463 | | 9.74 | 2.81 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,640 | | 97.4 | 8.12 | | 1 |
| 01667 | Sodium | 7440-23-5 | 68.9 | J | 97.4 | 16.3 | | 1 |
| 06969 | Tin | 7440-31-5 | 3.48 | J | 9.74 | 0.214 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,210 | | 0.974 | 0.166 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 33.9 | | 0.974 | 0.127 | | 1 |
| 06972 | Zinc | 7440-66-6 | 59.3 | | 3.90 | 0.195 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.44 | J | 4.87 | 0.818 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.271 | J | 0.390 | 0.0974 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.195 | U | 0.195 | 0.0253 | | 2 |
| 06144 | Strontium | 7440-24-6 | 16.3 | | 0.390 | 0.0662 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.295 | | 0.195 | 0.0292 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0161 | U | 0.0161 | 0.0097 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.35 | J | 0.42 | 0.15 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 7.59 | | 0.0100 | 0.0100 | | 1 |
| | The pH was measured in water at 21.9 C. | | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.2 | | 0.10 | 0.10 | | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | | |

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**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.997 | U | 0.997 | 0.0245 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 4.98 | U | 4.98 | 0.0309 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0387 | JQ | 4.98 | 0.0311 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.181 | JB | 4.98 | 0.0334 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.125 | JBQ | 4.98 | 0.0332 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 3.24 | JB | 4.98 | 0.0342 | | 1 |
| 11031 | OCDD | 3268-87-9 | 31.9 | B | 9.97 | 0.0331 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0959 | JQ | 0.997 | 0.0284 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.256 | JB | 4.98 | 0.0187 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0600 | JBQ | 4.98 | 0.0196 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.123 | JBQ | 4.98 | 0.0268 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.129 | JBQ | 4.98 | 0.0231 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0486 | JBQ | 4.98 | 0.0279 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0930 | JB | 4.98 | 0.0245 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.602 | JB | 4.98 | 0.0155 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0588 | JB | 4.98 | 0.0342 | | 1 |
| 11031 | OCDF | 39001-02-0 | 1.26 | JBQ | 9.97 | 0.0383 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0837 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 78 | 25 - 164 |
| 13C12-12378-PeCDD | 71 | 25 - 181 |
| 13C12-123478-HxCDD | 79 | 32 - 141 |
| 13C12-123678-HxCDD | 81 | 28 - 130 |
| 13C12-123789-HxCDD | 77 | 28 - 130 |
| 13C12-1234678-HpCDD | 74 | 23 - 140 |
| 13C12-OCDD | 61 | 17 - 157 |
| 13C12-2378-TCDF | 64 | 24 - 169 |
| 13C12-12378-PeCDF | 75 | 24 - 185 |
| 13C12-23478-PeCDF | 64 | 21 - 178 |
| 13C12-123478-HxCDF | 66 | 26 - 152 |
| 13C12-123678-HxCDF | 78 | 26 - 123 |
| 13C12-234678-HxCDF | 68 | 28 - 136 |
| 13C12-123789-HxCDF | 70 | 29 - 147 |
| 13C12-1234678-HpCDF | 94 | 28 - 143 |
| 13C12-1234789-HpCDF | 50 | 26 - 138 |
| 13C12-OCDF | 43 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

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**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

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64605 SDG#: PH217-05

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14163SLC026 | 06/15/2014 23:25 | Holly Berry | 1 |
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 12:26 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14163SLC026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141610011A | 06/14/2014 10:34 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 05:46 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 16:24 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 19:32 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141580012A | 06/10/2014 09:10 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141580012A | 06/09/2014 02:30 | Sherry L Morrow | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141610011A | 06/11/2014 07:30 | Kerrie A Freeburn | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141620008A | 06/12/2014 17:19 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141600033A | 06/13/2014 16:06 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 19:20 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 07:13 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141600033A | 06/10/2014 10:00 | Denise L Trimby | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141620008A | 06/11/2014 18:45 | David V Hershey Jr | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14162002 | 06/13/2014 21:33 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14162002 | 06/11/2014 11:30 | Brett M Weidman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-0.5 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488117**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:30 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64605 SDG#: PH217-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06944 | Antimony | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 12:48 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:04 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141600637001B | 06/11/2014 06:03 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:03 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:03 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:03 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141600638001 | 06/11/2014 09:12 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141600637001 | 06/10/2014 11:56 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141600638001 | 06/10/2014 13:25 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 2 | 14160243201A | 06/11/2014 21:22 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14156039402A | 06/05/2014 20:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14160243201A | 06/09/2014 20:00 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles SW-846 8270D** | | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10726 | Aniline | 62-53-3 | 350 | U | 350 | 170 | | 1 |
| 10726 | Benzidine | 92-87-5 | 1,700 | U | 1,700 | 730 | | 1 |
| 10726 | Benzoic acid | 65-85-0 | 520 | U | 520 | 170 | | 1 |
| 10726 | Benzyl alcohol | 100-51-6 | 350 | U | 350 | 170 | | 1 |
| 10726 | 1,1'-Biphenyl | 92-52-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Bromophenyl-phenylether | 101-55-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-butoxy-Ethanol | 111-76-2 | 180 | U | 180 | 180 | | 1 |
| | 2-butoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Carbazole | 86-74-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloro-3-methylphenol | 59-50-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chloroaniline | 106-47-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethoxy)methane | 111-91-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroethyl)ether | 111-44-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | bis(2-Chloroisopropyl)ether | 39638-32-9 | 35 | U | 35 | 17 | | 1 |
| | Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Chloronaphthalene | 91-58-7 | 34 | U | 34 | 7 | | 1 |
| 10726 | 2-Chlorophenol | 95-57-8 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Chlorophenyl-phenylether | 7005-72-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Dibenzofuran | 132-64-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,2-Dichlorobenzene | 95-50-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,3-Dichlorobenzene | 541-73-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 1,4-Dichlorobenzene | 106-46-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,3'-Dichlorobenzidine | 91-94-1 | 350 | U | 350 | 100 | | 1 |
| 10726 | 2,4-Dichlorophenol | 120-83-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,6-Dichlorophenol | 87-65-0 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4-Dimethylphenol | 105-67-9 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3,5-Dimethylphenol | 108-68-9 | 170 | U | 170 | 35 | | 1 |
| 10726 | 4,6-Dinitro-2-methylphenol | 534-52-1 | 520 | U | 520 | 170 | | 1 |
| 10726 | 2,4-Dinitrophenol | 51-28-5 | 690 | U | 690 | 310 | | 1 |
| 10726 | 1,2-Diphenylhydrazine | 122-66-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorobenzene | 118-74-1 | 18 | U | 18 | 3 | | 1 |
| 10726 | Hexachlorobutadiene | 87-68-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | Hexachlorocyclopentadiene | 77-47-4 | 520 | U | 520 | 170 | | 1 |
| 10726 | Hexachloroethane | 67-72-1 | 170 | U | 170 | 35 | | 1 |
| 10726 | Isophorone | 78-59-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Methylphenol | 95-48-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Methylphenol | 106-44-5 | 35 | U | 35 | 17 | | 1 |
| | 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | | | |
| 10726 | NDPA as diphenylamine | n.a. | 170 | U | 170 | 35 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | 2-Nitroaniline | 88-74-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 3-Nitroaniline | 99-09-2 | 170 | U | 170 | 70 | | 1 |
| 10726 | 4-Nitroaniline | 100-01-6 | 170 | U | 170 | 70 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10726 | Nitrobenzene | 98-95-3 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-Nitrophenol | 88-75-5 | 35 | U | 35 | 17 | | 1 |
| 10726 | 4-Nitrophenol | 100-02-7 | 520 | U | 520 | 170 | | 1 |
| 10726 | N-Nitroso-di-n-propylamine | 621-64-7 | 35 | U | 35 | 17 | | 1 |
| 10726 | N-Nitrosodiphenylamine | 86-30-6 | 35 | U | 35 | 17 | | 1 |
| | N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. | | | | | | | |
| 10726 | Pentachlorophenol | 87-86-5 | 180 | U | 180 | 35 | | 1 |
| 10726 | Phenol | 108-95-2 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2-phenoxy-Ethanol | 122-99-6 | 180 | U | 180 | 180 | | 1 |
| | 2-phenoxy-Ethanol was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | Pyridine | 110-86-1 | 170 | U | 170 | 70 | | 1 |
| 10726 | 1,2,3,4-Tetrahydronaphthalene | 119-64-2 | 170 | U | 170 | 35 | | 1 |
| | 1,2,3,4-Tetrahydronaphthalene (Tetralin) was quantified using a single point calibration analyzed at the beginning of each 12 hour tune period. | | | | | | | |
| 10726 | 1,2,4-Trichlorobenzene | 120-82-1 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,5-Trichlorophenol | 95-95-4 | 35 | U | 35 | 17 | | 1 |
| 10726 | 2,4,6-Trichlorophenol | 88-06-2 | 35 | U | 35 | 17 | | 1 |
| | The QC limits for 1,2,3,4-tetrahydronaphthalene are advisory. | | | | | | | |
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 18 | U | 18 | 3.5 | | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Chrysene | 218-01-9 | 1.7 | U | 1.7 | 0.35 | | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Morpholine | 110-91-8 | 21 | U | 21 | 21 | | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 19 | U | 19 | 6.3 | | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.70 | | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.70 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | | |
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | | 25.83 |
| **Explosives** | **SW-846 8330A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 10132 | 4-Amino-2,6-Dinitrotoluene | 19406-51-0 | 310 | U | 310 | 160 | 10000000 | 1 |
| 10132 | 2-Amino-4,6-Dinitrotoluene | 35572-78-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Diamino-4-nitrotoluene | 59229-75-3 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 2,4-Diamino-6-nitrotoluene | 6629-29-4 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | 1,3-Dinitrobenzene | 99-65-0 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4-Dinitrotoluene | 121-14-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,6-Dinitrotoluene | 606-20-2 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | HMX | 2691-41-0 | 420 | U | 420 | 210 | 10000000 | 1 |
| 10132 | Nitrobenzene | 98-95-3 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | Nitroglycerin | 55-63-0 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | 2-Nitrotoluene | 88-72-2 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | 3-Nitrotoluene | 99-08-1 | 310 | U | 310 | 260 | 10000000 | 1 |
| 10132 | 4-Nitrotoluene | 99-99-0 | 310 | U | 310 | 210 | 10000000 | 1 |
| 10132 | PETN | 78-11-5 | 2,100 | U | 2,100 | 1,000 | 10000000 | 1 |
| 10132 | RDX | 121-82-4 | 310 | U | 310 | 140 | 10000000 | 1 |
| 10132 | Tetryl | 479-45-8 | 310 | U | 310 | 170 | 10000000 | 1 |
| 10132 | 1,3,5-Trinitrobenzene | 99-35-4 | 310 | U | 310 | 100 | 10000000 | 1 |
| 10132 | 2,4,6-Trinitrotoluene | 118-96-7 | 310 | U | 310 | 100 | 10000000 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,3-Dinitrobenzene | | | | | | | |

*=This limit was used in the evaluation of the final result
Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 38 | U | 38 | 13 | | 1 |
| 10401 | Dalapon | 75-99-0 | 94 | U | 94 | 46 | | 1 |
| 10401 | 2,4-DB | 94-82-6 | 18 | U | 18 | 6.5 | | 1 |
| 10401 | Dicamba | 1918-00-9 | 13 | U | 13 | 4.2 | | 1 |
| 10401 | Dinoseb | 88-85-7 | 25 | U | 25 | 9.4 | | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 18 | U | 18 | 9.4 | | 1 |
| 10401 | MCPA | 94-74-6 | 2,600 | U | 2,600 | 790 | | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,600 | U | 2,600 | 780 | | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.8 | U | 1.8 | 0.86 | | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.8 | U | 1.8 | 0.78 | | 1 |
| **Perchlorate** | **SW-846 6850 1/2007** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 06557 | 6a Perchlorate (Method 6850) | 14797-73-0 | 5.2 | U | 5.2 | 2.2 | | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.0 | U | 2.0 | 1.0 | | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Chlordane | 57-74-9 | 18 | U | 18 | 4.2 | | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.87 | U | 0.87 | 0.47 | | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.87 | U | 0.87 | 0.23 | | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endrin | 72-20-8 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 1.8 | U | 1.8 | 0.34 | | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.9 | U | 1.9 | 0.63 | | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.87 | U | 0.87 | 0.18 | | 1 |
| 10590 | Methoxychlor | 72-43-5 | 7.0 | U | 7.0 | 1.8 | | 1 |
| 10590 | Mirex | 2385-85-5 | 1.8 | U | 1.8 | 0.37 | | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 15 | | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/kg | | ug/kg | ug/kg | ug/kg | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.3 | | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.6 | | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.1 | | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | | 1 |
| | For all QC parameters which are outside project defined limits, but within the laboratory statistical limits, no corrective action is taken. | | | | | | | |
| **GC Miscellaneous** | **SW-846 8015C Feb 2007 Rev 3** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12934 | Diethylene glycol | 111-46-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Ethylene glycol | 107-21-1 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Propylene glycol | 57-55-6 | 10 | U | 10 | 5.2 | | 1 |
| 12934 | Triethylene glycol | 112-27-6 | 10 | U | 10 | 5.2 | | 1 |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10318 | m-Terphenyl | 92-06-8 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | o-Terphenyl | 84-15-1 | 0.18 | U | 0.18 | 0.070 | | 1 |
| 10318 | p-Terphenyl | 92-94-4 | 0.18 | U | 0.18 | 0.070 | | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C21-C30) | n.a. | 2.3 | J | 5.2 | 2.1 | | 1 |
| 12952 | EFH (C30-C40) | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 27,200 | | 41.8 | 7.53 | | 1 |
| 06944 | Antimony | 7440-36-0 | 4.18 | U | 4.18 | 0.773 | | 1 |
| 06935 | Arsenic | 7440-38-2 | 1.66 | J | 4.18 | 0.731 | | 1 |
| 06946 | Barium | 7440-39-3 | 98.7 | | 1.04 | 0.0345 | | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.923 | J | 1.04 | 0.0700 | | 1 |
| 07914 | Boron | 7440-42-8 | 5.47 | J | 10.4 | 0.878 | | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.167 | J | 1.04 | 0.0794 | | 1 |
| 01650 | Calcium | 7440-70-2 | 2,200 | | 20.9 | 3.49 | | 1 |
| 06951 | Chromium | 7440-47-3 | 19.0 | | 3.13 | 0.167 | | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.15 | | 1.04 | 0.103 | | 1 |
| 06953 | Copper | 7440-50-8 | 6.20 | | 2.09 | 0.303 | | 1 |
| 01654 | Iron | 7439-89-6 | 24,000 | | 41.8 | 3.78 | | 1 |

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**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06955 | Lead | 7439-92-1 | 8.50 | | 3.13 | 0.522 | | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.2 | 0.36 | | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,230 | | 10.4 | 1.75 | | 1 |
| 06958 | Manganese | 7439-96-5 | 226 | | 1.04 | 0.0867 | | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.09 | U | 2.09 | 0.178 | | 1 |
| 06961 | Nickel | 7440-02-0 | 9.18 | | 2.09 | 0.136 | | 1 |
| 10145 | Phosphorus | 7723-14-0 | 234 | | 10.4 | 3.02 | | 1 |
| 01662 | Potassium | 7440-09-7 | 3,120 | | 104 | 8.71 | | 1 |
| 01667 | Sodium | 7440-23-5 | 102 | J | 104 | 17.5 | | 1 |
| 06969 | Tin | 7440-31-5 | 3.76 | J | 10.4 | 0.230 | | 1 |
| 06970 | Titanium | 7440-32-6 | 1,440 | | 1.04 | 0.178 | | 1 |
| 06971 | Vanadium | 7440-62-2 | 38.1 | | 1.04 | 0.136 | | 1 |
| 06972 | Zinc | 7440-66-6 | 55.3 | | 4.18 | 0.209 | | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.29 | J | 5.22 | 0.878 | | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.264 | J | 0.418 | 0.104 | | 2 |
| 06142 | Silver | 7440-22-4 | 0.0389 | J | 0.209 | 0.0272 | | 2 |
| 06144 | Strontium | 7440-24-6 | 25.0 | | 0.418 | 0.0711 | | 2 |
| 06145 | Thallium | 7440-28-0 | 0.269 | | 0.209 | 0.0313 | | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0103 | J | 0.0166 | 0.0099 | | 1 |
| **Wet Chemistry** | **SW-846 7199** | | **mg/kg** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 05892 | 2a Chromium VI by EPA 7199 | 18540-29-9 | 0.41 | U | 0.41 | 0.14 | | 1 |
| | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22 C. | n.a. | 7.09 | | 0.0100 | 0.0100 | | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 4.3 | | 0.10 | 0.10 | | 1 |

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**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.03 | U | 1.03 | 0.0248 | | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.17 | U | 5.17 | 0.0242 | | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 5.17 | U | 5.17 | 0.0175 | | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.0445 | JBQ | 5.17 | 0.0189 | | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.0280 | JBQ | 5.17 | 0.0179 | | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 0.166 | JBQ | 5.17 | 0.0205 | | 1 |
| 11031 | OCDD | 3268-87-9 | 1.62 | JB | 10.3 | 0.0283 | | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 1.03 | U | 1.03 | 0.0233 | | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 5.17 | U | 5.17 | 0.0122 | | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.0392 | JBQ | 5.17 | 0.0135 | | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.0301 | JBQ | 5.17 | 0.0146 | | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.0294 | JBQ | 5.17 | 0.0122 | | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.0532 | JBQ | 5.17 | 0.0157 | | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.0166 | JBQ | 5.17 | 0.0133 | | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.0589 | JBQ | 5.17 | 0.00736 | | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 5.17 | U | 5.17 | 0.0154 | | 1 |
| 11031 | OCDF | 39001-02-0 | 0.113 | JBQ | 10.3 | 0.0283 | | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.000486 | | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 84 | 25 - 164 |
| 13C12-12378-PeCDD | 78 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 89 | 28 - 130 |
| 13C12-123789-HxCDD | 85 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 65 | 17 - 157 |
| 13C12-2378-TCDF | 70 | 24 - 169 |
| 13C12-12378-PeCDF | 89 | 24 - 185 |
| 13C12-23478-PeCDF | 72 | 21 - 178 |
| 13C12-123478-HxCDF | 75 | 26 - 152 |
| 13C12-123678-HxCDF | 90 | 26 - 123 |
| 13C12-234678-HxCDF | 77 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 100 | 28 - 143 |
| 13C12-1234789-HpCDF | 56 | 26 - 138 |
| 13C12-OCDF | 50 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

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**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

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64650 SDG#: PH217-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Action Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

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**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

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CDM Federal Programs Corp.
3201 Jermantown Road
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64650 SDG#: PH217-06*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10726 | 8a SVOCs by EPA 8270D | SW-846 8270D | 1 | 14163SLC026 | 06/15/2014 23:51 | Holly Berry | 1 |
| 12969 | 7a SVOC SIM 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 13:23 | Mark A Clark | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 14163SLC026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/13/2014 20:18 | Marie D Beamenderfer | 25.83 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415634714 | 06/05/2014 15:25 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415634714 | 06/05/2014 15:25 | Mitchell R Washel | n.a. |
| 10132 | 24a Energetics by 8330A | SW-846 8330A | 1 | 141610011A | 06/14/2014 11:16 | James H Place | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141560024A | 06/07/2014 06:12 | Lisa A Reinert | 1 |
| 06557 | 6a Perchlorate (Method 6850) | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 16:37 | Richard A Shober | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141580004A | 06/10/2014 19:46 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141580012A | 06/10/2014 09:29 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141580012A | 06/09/2014 02:30 | Sherry L Morrow | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141580004A | 06/08/2014 08:50 | Katheryne V Sponheimer | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141560024A | 06/06/2014 10:00 | William H Saadeh | 1 |
| 06568 | Perchlorate Soil Prep | SW-846 6850 1/2007 | 1 | 141580001A | 06/09/2014 06:15 | Maria Davenport | 1 |
| 11137 | Energetics Extraction | SW-846 8330 | 1 | 141610011A | 06/11/2014 07:30 | Kerrie A Freeburn | 1 |
| 12934 | 26a Glycols by EPA 8015C | SW-846 8015C Feb 2007 Rev 3 | 1 | 141620008A | 06/12/2014 17:34 | Tyler O Griffin | 1 |
| 10318 | 27a Terphenyls by 8015B | SW-846 8015B | 1 | 141600033A | 06/13/2014 14:14 | Glorines Suarez-Rivera | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 19:42 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 07:35 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 10303 | Terphenyls soil prep | SW-846 3550B | 1 | 141600033A | 06/10/2014 10:00 | Denise L Trimby | 1 |
| 12933 | Glycols Sonication Extraction | SW-846 3550C | 1 | 141620008A | 06/11/2014 18:45 | David V Hershey Jr | 1 |

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**Sample Description: SL-646-SA5C-TR-5.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7488118**
**LL Group # 1479557**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/04/2014 11:45 by AP

Submitted: 06/05/2014 09:15
Reported: 07/07/2014 12:04

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

64650 SDG#: PH217-06*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14162002 | 06/13/2014 22:30 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14162002 | 06/11/2014 11:30 | Brett M Weidman | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 12:52 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:15 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141600637001B | 06/11/2014 06:10 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:10 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:10 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:10 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141600638001 | 06/11/2014 09:14 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141600637001 | 06/10/2014 11:56 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141600638001 | 06/10/2014 13:25 | James L Mertz | 1 |
| 05892 | 2a Chromium VI by EPA 7199 | SW-846 7199 | 1 | 14160243201A | 06/11/2014 21:30 | Clinton M Wilson | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14156039402A | 06/05/2014 20:00 | Luz M Groff | 1 |
| 02432 | Cr VI by EPA 7199 - Ext. | SW-846 3060A | 1 | 14160243201A | 06/09/2014 20:00 | Daniel S Smith | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

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Shaded result = The results or reporting limit exceeded the client-provided action limit.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14161WAH026 | Sample number(s): 7488113 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 98 | 83-119 | 0 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 92 | 81-130 | 2 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 97 | 83-125 | 1 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 102 | 79-122 | 0 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 98 | 80-121 | 1 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 103 | 104 | 79-136 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 98 | 67-118 | 0 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 99 | 72-132 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 101 | 81-131 | 3 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 85 | 85 | 40-138 | 1 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 102 | 105 | 64-141 | 2 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 99 | 84-118 | 6 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 95 | 66-133 | 5 | 30 |
| Diethylphthalate | 0.069 | J | 1.0 | 0.050 | ug/l | 97 | 95 | 64-137 | 2 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 79 | 79 | 23-139 | 0 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.096 | J | 1.0 | 0.050 | ug/l | 93 | 639* | 70-143 | 149* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 99 | 84-124 | 2 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 96 | 82-119 | 0 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 96 | 68-132 | 3 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 87 | 86 | 86-130 | 1 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 84 | 82 | 81-131 | 2 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 86 | 85 | 82-122 | 2 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 68 | 66 | 56-96 | 4 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 85 | 78 | 57-145 | 9 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 97 | 97 | 83-116 | 0 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 96 | 78-125 | 2 | 30 |
| Batch number: 14161WAI026 | Sample number(s): 7488113 | | | | | | | | | |
| Acenaphthene | 0.5 | U | 0.5 | 0.1 | ug/l | 93 | 87 | 80-112 | 7 | 30 |
| Acenaphthylene | 0.5 | U | 0.5 | 0.1 | ug/l | 99 | 91 | 84-125 | 9 | 30 |
| Aniline | 1 | U | 1. | 0.5 | ug/l | 80 | 84 | 43-94 | 4 | 30 |
| Anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 100 | 92 | 82-116 | 7 | 30 |
| Benzidine | 60 | U | 60. | 20 | ug/l | 0* | 65 | 20-94 | 200* | 30 |
| Benzo(a)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 108 | 97 | 81-126 | 11 | 30 |
| Benzo(a)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 101 | 89 | 82-116 | 13 | 30 |
| Benzo(b)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 102 | 93 | 82-121 | 10 | 30 |
| Benzo(g,h,i)perylene | 0.5 | U | 0.5 | 0.1 | ug/l | 100 | 90 | 76-128 | 11 | 30 |
| Benzo(k)fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 101 | 90 | 81-122 | 11 | 30 |
| Benzoic acid | 15 | U | 15. | 6 | ug/l | 137* | 117* | 10-97 | 16 | 30 |
| Benzyl alcohol | 15 | U | 15. | 10 | ug/l | 88 | 88 | 66-112 | 1 | 30 |
| 1,1'-Biphenyl | 1 | U | 1. | 0.5 | ug/l | 89 | 82 | 78-109 | 8 | 30 |
| 4-Bromophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 100 | 92 | 82-118 | 8 | 30 |
| Butylbenzylphthalate | 5 | U | 5. | 2 | ug/l | 94 | 91 | 79-119 | 4 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | 5 | U | 5. | 2 | ug/l | 99 | 93 | 80-119 | 7 | 30 |
| Carbazole | 1 | U | 1. | 0.5 | ug/l | 99 | 95 | 84-117 | 5 | 30 |
| 4-Chloro-3-methylphenol | 1 | U | 1. | 0.5 | ug/l | 99 | 91 | 80-123 | 9 | 30 |
| 4-Chloroaniline | 1 | U | 1. | 0.5 | ug/l | 92 | 95 | 55-113 | 3 | 30 |
| bis(2-Chloroethoxy)methane | 1 | U | 1. | 0.5 | ug/l | 96 | 96 | 77-115 | 0 | 30 |
| bis(2-Chloroethyl)ether | 1 | U | 1. | 0.5 | ug/l | 95 | 95 | 78-112 | 0 | 30 |
| bis(2-Chloroisopropyl)ether | 1 | U | 1. | 0.5 | ug/l | 99 | 96 | 56-119 | 3 | 30 |
| 2-Chloronaphthalene | 1 | U | 1. | 0.4 | ug/l | 91 | 84 | 71-120 | 7 | 30 |
| 2-Chlorophenol | 1 | U | 1. | 0.5 | ug/l | 91 | 83 | 76-111 | 9 | 30 |
| 4-Chlorophenyl-phenylether | 1 | U | 1. | 0.5 | ug/l | 98 | 91 | 77-114 | 8 | 30 |
| Chrysene | 0.5 | U | 0.5 | 0.1 | ug/l | 105 | 93 | 81-120 | 11 | 30 |
| Dibenz(a,h)anthracene | 0.5 | U | 0.5 | 0.1 | ug/l | 103 | 92 | 83-124 | 11 | 30 |
| Dibenzofuran | 1 | U | 1. | 0.5 | ug/l | 95 | 89 | 81-110 | 7 | 30 |
| 1,2-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 84 | 78 | 69-107 | 7 | 30 |
| 1,3-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 78 | 72 | 69-107 | 7 | 30 |
| 1,4-Dichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 79 | 73 | 66-111 | 7 | 30 |
| 3,3'-Dichlorobenzidine | 5 | U | 5. | 2 | ug/l | 80 | 84 | 47-108 | 5 | 30 |
| 2,4-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 97 | 88 | 84-119 | 11 | 30 |
| 2,6-Dichlorophenol | 1 | U | 1. | 0.5 | ug/l | 104 | 103 | 80-116 | 1 | 30 |
| Diethylphthalate | 5 | U | 5. | 2 | ug/l | 94 | 89 | 70-118 | 6 | 30 |
| 2,4-Dimethylphenol | 1 | U | 1. | 0.5 | ug/l | 93 | 91 | 81-114 | 3 | 30 |
| 3,5-Dimethylphenol | 10 | U | 10. | 3 | ug/l | 102 | 95 | 70-130 | 7 | 30 |
| Dimethylphthalate | 5 | U | 5. | 2 | ug/l | 78 | 79 | 43-128 | 1 | 30 |
| 4,6-Dinitro-2-methylphenol | 15 | U | 15. | 5 | ug/l | 102 | 92 | 56-145 | 11 | 30 |
| 2,4-Dinitrophenol | 30 | U | 30. | 10 | ug/l | 98 | 89 | 32-148 | 9 | 30 |
| 1,2-Diphenylhydrazine | 1 | U | 1. | 0.5 | ug/l | 100 | 94 | 74-124 | 5 | 30 |
| bis(2-Ethylhexyl)phthalate | 5 | U | 5. | 2 | ug/l | 109 | 90 | 78-124 | 19 | 30 |
| Fluoranthene | 0.5 | U | 0.5 | 0.1 | ug/l | 103 | 94 | 82-121 | 9 | 30 |
| Fluorene | 0.5 | U | 0.5 | 0.1 | ug/l | 98 | 92 | 80-117 | 7 | 30 |
| Hexachlorobenzene | 0.5 | U | 0.5 | 0.1 | ug/l | 95 | 85 | 80-119 | 10 | 30 |
| Hexachlorobutadiene | 1 | U | 1. | 0.5 | ug/l | 70 | 60* | 61-120 | 16 | 30 |
| Hexachlorocyclopentadiene | 15 | U | 15. | 5 | ug/l | 65 | 53 | 28-133 | 20 | 30 |
| Hexachloroethane | 5 | U | 5. | 1 | ug/l | 72 | 64 | 55-109 | 12 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 101 | 88 | 80-126 | 13 | 30 |
| Isophorone | 1 | U | 1. | 0.5 | ug/l | 106 | 105 | 82-119 | 1 | 30 |
| 1-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 92 | 84 | 83-116 | 10 | 30 |
| 2-Methylnaphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 85 | 80 | 75-106 | 6 | 30 |
| 2-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 89 | 84 | 72-111 | 6 | 30 |
| 4-Methylphenol | 1 | U | 1. | 0.5 | ug/l | 85 | 80 | 63-110 | 6 | 30 |
| Naphthalene | 0.5 | U | 0.5 | 0.1 | ug/l | 87 | 82 | 75-108 | 6 | 30 |
| NDPA as diphenylamine | 5 | U | 5. | 2 | ug/l | 98 | 92 | 70-130 | 6 | 30 |
| 2-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 84-122 | 0 | 30 |
| 3-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 101 | 100 | 70-118 | 1 | 30 |
| 4-Nitroaniline | 1 | U | 1. | 0.5 | ug/l | 87 | 91 | 66-110 | 5 | 30 |
| Nitrobenzene | 1 | U | 1. | 0.5 | ug/l | 99 | 97 | 77-119 | 1 | 30 |
| 2-Nitrophenol | 1 | U | 1. | 0.5 | ug/l | 103 | 97 | 81-128 | 6 | 30 |
| 4-Nitrophenol | 30 | U | 30. | 10 | ug/l | 59 | 54 | 25-95 | 9 | 30 |
| N-Nitroso-di-n-propylamine | 1 | U | 1. | 0.5 | ug/l | 99 | 99 | 71-117 | 0 | 30 |
| N-Nitrosodimethylamine | 5 | U | 5. | 2 | ug/l | 74 | 72 | 38-98 | 3 | 30 |
| N-Nitrosodiphenylamine | 1 | U | 1. | 0.5 | ug/l | 98 | 92 | 80-115 | 6 | 30 |
| Di-n-octylphthalate | 5 | U | 5. | 2 | ug/l | 110 | 98 | 78-129 | 11 | 30 |
| Pentachlorophenol | 5 | U | 5. | 1 | ug/l | 113 | 106 | 54-124 | 6 | 30 |
| Phenanthrene | 0.5 | U | 0.5 | 0.1 | ug/l | 95 | 88 | 81-114 | 8 | 30 |
| Phenol | 1 | U | 1. | 0.5 | ug/l | 51 | 49 | 31-79 | 4 | 30 |
| Pyrene | 0.5 | U | 0.5 | 0.1 | ug/l | 94 | 86 | 81-112 | 8 | 30 |
| Pyridine | 5 | U | 5. | 2 | ug/l | 49 | 65 | 22-96 | 29 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1 | U | 1. | 0.5 | ug/l | 83 | 75* | 77-111 | 9 | 30 |
| 2,4,5-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 103 | 92 | 81-121 | 11 | 30 |
| 2,4,6-Trichlorophenol | 1 | U | 1. | 0.5 | ug/l | 106 | 95 | 84-119 | 10 | 30 |
| Batch number: 14163SLB026 | Sample number(s): 7488115-7488118 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-121 | | |
| Morpholine | 20 | U | 20. | 20 | ug/kg | | | | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 68* | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-119 | | |
| Batch number: 14163SLC026 | Sample number(s): 7488115-7488118 | | | | | | | | | |
| Aniline | 330 U | | 330. | 170 | ug/kg | 74 | | 43-110 | | |
| Benzidine | 1,700 U | | 1,700. | 700 | ug/kg | 43 | | 21-78 | | |
| Benzoic acid | 500 U | | 500. | 170 | ug/kg | 92 | | 41-122 | | |
| Benzyl alcohol | 330 U | | 330. | 170 | ug/kg | 95 | | 81-121 | | |
| 1,1'-Biphenyl | 33 | U | 33. | 17 | ug/kg | 86 | | 76-117 | | |
| 4-Bromophenyl-phenylether | 33 | U | 33. | 17 | ug/kg | 92 | | 84-120 | | |
| 2-butoxy-Ethanol | 170 U | | 170. | 170 | ug/kg | | | | | |
| Carbazole | 33 | U | 33. | 17 | ug/kg | 85 | | 84-119 | | |
| 4-Chloro-3-methylphenol | 33 | U | 33. | 17 | ug/kg | 91 | | 86-128 | | |
| 4-Chloroaniline | 33 | U | 33. | 17 | ug/kg | 41 | | 10-105 | | |
| bis(2-Chloroethoxy)methane | 33 | U | 33. | 17 | ug/kg | 84 | | 71-121 | | |
| bis(2-Chloroethyl)ether | 33 | U | 33. | 17 | ug/kg | 85 | | 77-115 | | |
| bis(2-Chloroisopropyl)ether | 33 | U | 33. | 17 | ug/kg | 83 | | 56-129 | | |
| 2-Chloronaphthalene | 33 | U | 33. | 7 | ug/kg | 80 | | 63-146 | | |
| 2-Chlorophenol | 33 | U | 33. | 17 | ug/kg | 91 | | 80-122 | | |
| 4-Chlorophenyl-phenylether | 33 | U | 33. | 17 | ug/kg | 92 | | 83-115 | | |
| Dibenzofuran | 33 | U | 33. | 17 | ug/kg | 87 | | 85-115 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 87 | | 79-112 | | |
| 1,3-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 87 | | 79-113 | | |
| 1,4-Dichlorobenzene | 33 | U | 33. | 17 | ug/kg | 87 | | 79-112 | | |
| 3,3'-Dichlorobenzidine | 330 U | | 330. | 100 | ug/kg | 53 | | 10-125 | | |
| 2,4-Dichlorophenol | 33 | U | 33. | 17 | ug/kg | 95 | | 81-123 | | |
| 2,6-Dichlorophenol | 33 | U | 33. | 17 | ug/kg | 93 | 80 | 77-113 | 15 | 30 |
| 2,4-Dimethylphenol | 33 | U | 33. | 17 | ug/kg | 90 | | 83-120 | | |
| 3,5-Dimethylphenol | 170 U | | 170. | 33 | ug/kg | 116 | | 70-130 | | |
| 4,6-Dinitro-2-methylphenol | 500 U | | 500. | 170 | ug/kg | 93 | | 67-131 | | |
| 2,4-Dinitrophenol | 660 U | | 660. | 300 | ug/kg | 92 | | 35-141 | | |
| 1,2-Diphenylhydrazine | 33 | U | 33. | 17 | ug/kg | 86 | | 77-111 | | |
| Hexachlorobenzene | 17 | U | 17. | 3 | ug/kg | 98 | | 80-121 | | |
| Hexachlorobutadiene | 33 | U | 33. | 17 | ug/kg | 95 | | 78-121 | | |
| Hexachlorocyclopentadiene | 500 U | | 500. | 170 | ug/kg | 97 | | 66-159 | | |
| Hexachloroethane | 170 U | | 170. | 33 | ug/kg | 83 | | 78-114 | | |
| Isophorone | 33 | U | 33. | 17 | ug/kg | 90 | | 77-119 | | |
| 2-Methylphenol | 33 | U | 33. | 17 | ug/kg | 93 | | 82-125 | | |
| 4-Methylphenol | 33 | U | 33. | 17 | ug/kg | 88 | | 78-126 | | |
| NDPA as diphenylamine | 170 U | | 170. | 33 | ug/kg | 89 | | 70-130 | | |
| 2-Nitroaniline | 33 | U | 33. | 17 | ug/kg | 94 | | 84-126 | | |
| 3-Nitroaniline | 170 U | | 170. | 67 | ug/kg | 82 | | 66-128 | | |
| 4-Nitroaniline | 170 U | | 170. | 67 | ug/kg | 68 | | 57-106 | | |
| Nitrobenzene | 33 | U | 33. | 17 | ug/kg | 85 | | 73-118 | | |
| 2-Nitrophenol | 33 | U | 33. | 17 | ug/kg | 92 | | 83-125 | | |
| 4-Nitrophenol | 500 U | | 500. | 170 | ug/kg | 79 | | 58-128 | | |
| N-Nitroso-di-n-propylamine | 33 | U | 33. | 17 | ug/kg | 81 | | 70-119 | | |
| N-Nitrosodiphenylamine | 33 | U | 33. | 17 | ug/kg | 90 | | 83-118 | | |
| Pentachlorophenol | 170 U | | 170. | 33 | ug/kg | 91 | | 57-128 | | |
| Phenol | 33 | U | 33. | 17 | ug/kg | 90 | | 76-124 | | |
| 2-phenoxy-Ethanol | 170 U | | 170. | 170 | ug/kg | | | | | |
| Pyridine | 170 U | | 170. | 67 | ug/kg | 75 | | 51-109 | | |
| 1,2,3,4-Tetrahydronaphthalene | 170 U | | 170. | 33 | ug/kg | 40* | | 70-130 | | |
| 1,2,4-Trichlorobenzene | 33 | U | 33. | 17 | ug/kg | 94 | | 84-119 | | |
| 2,4,5-Trichlorophenol | 33 | U | 33. | 17 | ug/kg | 95 | | 86-123 | | |
| 2,4,6-Trichlorophenol | 33 | U | 33. | 17 | ug/kg | 99 | | 81-123 | | |
| Batch number: 14157A94A | Sample number(s): 7488113 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 104 | 104 | 80-133 | 1 | 30 |
| Batch number: 14163A94A | Sample number(s): 7488114 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 98 | 101 | 80-133 | 3 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14164A16A | Sample number(s): 7488116,7488118 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 141610009A | Sample number(s): 7488113 | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 0.60 U | 0.60 | 0.30 | ug/l | 84 | 90 | 80-148 | 7 | 30 |
| 2-Amino-4,6-Dinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 78 | 81 | 77-115 | 3 | 30 |
| 2,6-Diamino-4-nitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 80 | 78 | 73-121 | 2 | 30 |
| 2,4-Diamino-6-nitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 79 | 77 | 72-119 | 2 | 30 |
| 1,3-Dinitrobenzene | 0.60 U | 0.60 | 0.20 | ug/l | 90 | 91 | 85-117 | 1 | 30 |
| 2,4-Dinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 90 | 91 | 83-115 | 1 | 30 |
| 2,6-Dinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 83 | 88 | 77-145 | 5 | 30 |
| HMX | 2.0 U | 2.0 | 0.65 | ug/l | 88 | 96 | 67-115 | 9 | 30 |
| Nitrobenzene | 0.60 U | 0.60 | 0.20 | ug/l | 85 | 88 | 80-115 | 3 | 30 |
| Nitroglycerin | 15 U | 15. | 5.2 | ug/l | 87 | 86 | 81-115 | 1 | 30 |
| 2-Nitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 84 | 86 | 74-115 | 3 | 30 |
| 3-Nitrotoluene | 1.2 U | 1.2 | 0.40 | ug/l | 91 | 93 | 83-118 | 2 | 30 |
| 4-Nitrotoluene | 1.2 U | 1.2 | 0.60 | ug/l | 83 | 85 | 76-120 | 2 | 30 |
| PETN | 18 U | 18. | 6.0 | ug/l | 91 | 93 | 81-115 | 3 | 30 |
| RDX | 0.60 U | 0.60 | 0.20 | ug/l | 83 | 88 | 76-120 | 6 | 30 |
| Tetryl | 0.60 U | 0.60 | 0.40 | ug/l | 72 | 79 | 47-150 | 9 | 30 |
| 1,3,5-Trinitrobenzene | 0.60 U | 0.60 | 0.20 | ug/l | 148* | 154* | 83-115 | 4 | 30 |
| 2,4,6-Trinitrotoluene | 0.60 U | 0.60 | 0.20 | ug/l | 85 | 88 | 84-117 | 3 | 30 |
| Batch number: 141610011A | Sample number(s): 7488115-7488118 | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 300 U | 300. | 150 | ug/kg | 103 | | 81-133 | | |
| 2-Amino-4,6-Dinitrotoluene | 300 U | 300. | 100 | ug/kg | 84 | | 79-120 | | |
| 2,6-Diamino-4-nitrotoluene | 400 U | 400. | 200 | ug/kg | 100 | 89 | 59-133 | 11 | 30 |
| 2,4-Diamino-6-nitrotoluene | 400 U | 400. | 200 | ug/kg | 99 | 89 | 58-132 | 11 | 30 |
| 1,3-Dinitrobenzene | 300 U | 300. | 100 | ug/kg | 90* | | 94-124 | | |
| 2,4-Dinitrotoluene | 300 U | 300. | 100 | ug/kg | 91 | | 83-125 | | |
| 2,6-Dinitrotoluene | 300 U | 300. | 100 | ug/kg | 91 | | 72-137 | | |
| HMX | 400 U | 400. | 200 | ug/kg | 68 | | 65-121 | | |
| Nitrobenzene | 300 U | 300. | 100 | ug/kg | 89 | | 81-116 | | |
| Nitroglycerin | 2,000 U | 2,000. | 1,000 | ug/kg | 72 | | 70-118 | | |
| 2-Nitrotoluene | 300 U | 300. | 200 | ug/kg | 93 | | 86-113 | | |
| 3-Nitrotoluene | 300 U | 300. | 250 | ug/kg | 88 | | 85-135 | | |
| 4-Nitrotoluene | 300 U | 300. | 200 | ug/kg | 85 | | 80-122 | | |
| PETN | 2,000 U | 2,000. | 1,000 | ug/kg | 115 | | 64-121 | | |
| RDX | 300 U | 300. | 130 | ug/kg | 85 | | 84-122 | | |
| Tetryl | 300 U | 300. | 160 | ug/kg | 84 | | 67-152 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1,3,5-Trinitrobenzene | 300 U | 300. | 100 | ug/kg | 96 | | 83-119 | | |
| 2,4,6-Trinitrotoluene | 300 U | 300. | 100 | ug/kg | 89 | | 82-133 | | |
| Batch number: 141560024A | Sample number(s): 7488115-7488118 | | | | | | | | |
| 2,4-D | 36 U | 36. | 12 | ug/kg | 129 | | 68-160 | | |
| Dalapon | 90 U | 90. | 44 | ug/kg | 75 | | 13-128 | | |
| 2,4-DB | 17 U | 17. | 6.2 | ug/kg | 129 | | 73-159 | | |
| Dicamba | 12 U | 12. | 4.0 | ug/kg | 125 | | 64-128 | | |
| Dinoseb | 24 U | 24. | 9.0 | ug/kg | 9* | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 U | 17. | 9.0 | ug/kg | 174 | | 86-178 | | |
| MCPA | 2,500 U | 2,500. | 760 | ug/kg | 102 | | 61-123 | | |
| MCPP (Mecoprop) | 2,500 U | 2,500. | 750 | ug/kg | 105 | | 59-128 | | |
| 2,4,5-T | 1.7 U | 1.7 | 0.82 | ug/kg | 139 | | 69-157 | | |
| 2,4,5-TP | 1.7 U | 1.7 | 0.75 | ug/kg | 137 | | 78-146 | | |
| Batch number: 141600003A | Sample number(s): 7488113 | | | | | | | | |
| 2,4-D | 0.50 U | 0.50 | 0.16 | ug/l | 125 | 137 | 68-155 | 9 | 30 |
| Dalapon | 1.3 U | 1.3 | 0.25 | ug/l | 51 | 51 | 27-127 | 1 | 30 |
| 2,4-DB | 1.0 U | 1.0 | 0.30 | ug/l | 101 | 102 | 60-172 | 1 | 30 |
| Dicamba | 0.30 U | 0.30 | 0.080 | ug/l | 123 | 129 | 65-142 | 5 | 30 |
| Dinoseb | 0.50 U | 0.50 | 0.12 | ug/l | 132 | 134 | 16-163 | 2 | 30 |
| 2,4-DP (Dichlorprop) | 0.50 U | 0.50 | 0.16 | ug/l | | | | | |
| MCPA | 200 U | 200. | 50 | ug/l | 120 | 129* | 65-128 | 7 | 30 |
| MCPP | 200 U | 200. | 50 | ug/l | 123 | 128 | 61-145 | 4 | 30 |
| 2,4,5-T | 0.050 U | 0.050 | 0.015 | ug/l | 117 | 120 | 67-163 | 3 | 30 |
| 2,4,5-TP | 0.050 U | 0.050 | 0.010 | ug/l | 121 | 133 | 71-162 | 9 | 30 |
| Batch number: 141580001A | Sample number(s): 7488115-7488118 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 5.0 U | 5.0 | 2.1 | ug/kg | 104 | | 85-115 | | |
| Batch number: 141600002A | Sample number(s): 7488113 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 1.0 U | 1.0 | 0.20 | ug/l | 95 | | 85-115 | | |
| Batch number: 141580004A | Sample number(s): 7488115-7488118 | | | | | | | | |
| Aldrin | 0.83 U | 0.83 | 0.17 | ug/kg | 87 | | 60-118 | | |
| Alpha BHC | 0.83 U | 0.83 | 0.17 | ug/kg | 86 | | 55-135 | | |
| Beta BHC | 1.9 U | 1.9 | 0.96 | ug/kg | 93 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 U | 0.83 | 0.17 | ug/kg | 92 | | 56-138 | | |
| Chlordane | 17 U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 U | 1.7 | 0.33 | ug/kg | 96 | | 69-141 | | |
| p,p-DDE | 1.7 U | 1.7 | 0.33 | ug/kg | 89 | | 69-130 | | |
| p,p-DDT | 1.7 U | 1.7 | 0.35 | ug/kg | 85 | | 64-139 | | |
| Delta BHC | 0.83 U | 0.83 | 0.45 | ug/kg | 100 | | 59-137 | | |
| Dieldrin | 1.7 U | 1.7 | 0.33 | ug/kg | 97 | | 68-134 | | |
| Endosulfan I | 0.83 U | 0.83 | 0.22 | ug/kg | 77 | | 56-128 | | |
| Endosulfan II | 1.7 U | 1.7 | 0.33 | ug/kg | 90 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 U | 1.7 | 0.33 | ug/kg | 101 | | 71-132 | | |
| Endrin | 1.7 U | 1.7 | 0.33 | ug/kg | 85 | | 70-132 | | |
| Endrin Aldehyde | 1.7 U | 1.7 | 0.33 | ug/kg | 94 | | 61-125 | | |
| Endrin Ketone | 1.8 U | 1.8 | 0.60 | ug/kg | 97 | | 69-126 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 76 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 96 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 88 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141580012A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 88 | 95 | 36-106 | 7 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 112 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 112 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141610003A | Sample number(s): 7488113 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 80 | 61 | 34-115 | 28 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 99 | 101 | 60-117 | 2 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 102 | 103 | 67-128 | 0 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141610004A | Sample number(s): 7488113 | | | | | | | | | |
| Aldrin | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 43 | 35* | 37-137 | 19 | 30 |
| Alpha BHC | 0.0080 | U | 0.0080 | 0.0024 | ug/l | 94 | 94 | 44-148 | 0 | 30 |
| Beta BHC | 0.0038 | J | 0.0080 | 0.0027 | ug/l | 93 | 91 | 48-147 | 3 | 30 |
| Gamma BHC - Lindane | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 96 | 94 | 44-146 | 1 | 30 |
| Chlordane | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| p,p-DDD | 0.016 | U | 0.016 | 0.0040 | ug/l | 99 | 87 | 44-152 | 13 | 30 |
| p,p-DDE | 0.016 | U | 0.016 | 0.0040 | ug/l | 75 | 64 | 44-146 | 17 | 30 |
| p,p-DDT | 0.016 | U | 0.016 | 0.0042 | ug/l | 94 | 80 | 44-146 | 16 | 30 |
| Delta BHC | 0.0080 | U | 0.0080 | 0.0027 | ug/l | 102 | 96 | 47-146 | 5 | 30 |
| Dieldrin | 0.016 | U | 0.016 | 0.0042 | ug/l | 97 | 89 | 45-146 | 9 | 30 |
| Endosulfan I | 0.0080 | U | 0.0080 | 0.0034 | ug/l | 79 | 71 | 39-140 | 11 | 30 |
| Endosulfan II | 0.016 | U | 0.016 | 0.012 | ug/l | 92 | 83 | 45-139 | 10 | 30 |
| Endosulfan Sulfate | 0.016 | U | 0.016 | 0.0046 | ug/l | 100 | 93 | 48-139 | 7 | 30 |
| Endrin | 0.016 | U | 0.016 | 0.0065 | ug/l | 96 | 86 | 43-139 | 11 | 30 |
| Endrin Aldehyde | 0.080 | U | 0.080 | 0.016 | ug/l | 93 | 88 | 43-144 | 5 | 20 |
| Endrin Ketone | 0.016 | U | 0.016 | 0.0040 | ug/l | 96 | 91 | 42-152 | 5 | 30 |
| Heptachlor | 0.0080 | U | 0.0080 | 0.0016 | ug/l | 69 | 59 | 36-146 | 16 | 30 |
| Heptachlor Epoxide | 0.0080 | U | 0.0080 | 0.0018 | ug/l | 97 | 90 | 49-142 | 7 | 30 |
| Methoxychlor | 0.080 | U | 0.080 | 0.024 | ug/l | 81 | 74 | 40-150 | 10 | 30 |
| Mirex | 0.040 | U | 0.040 | 0.0080 | ug/l | | | | | |
| Toxaphene | 0.80 | U | 0.80 | 0.24 | ug/l | | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141600045A | Sample number(s): 7488113 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 8.0 | mg/l | 87 | | 46-143 | | |
| Ethylene glycol | 10 | U | 10. | 8.0 | mg/l | 77 | | 63-128 | | |
| Propylene glycol | 10 | U | 10. | 8.0 | mg/l | 80 | | 62-136 | | |
| Triethylene glycol | 10 | U | 10. | 8.0 | mg/l | 81 | | 31-136 | | |
| Batch number: 141620008A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| Diethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 92 | | 54-149 | | |
| Ethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 89 | | 76-122 | | |
| Propylene glycol | 10 | U | 10. | 5.0 | mg/kg | 92 | | 67-131 | | |
| Triethylene glycol | 10 | U | 10. | 5.0 | mg/kg | 87 | | 34-145 | | |
| Batch number: 141600016A | Sample number(s): 7488113 | | | | | | | | | |
| m-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 94 | 95 | 61-108 | 0 | 20 |
| o-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 94 | 94 | 75-125 | 0 | 20 |
| p-Terphenyl | 0.0050 | U | 0.0050 | 0.0020 | mg/l | 87 | 87 | 63-110 | 1 | 20 |
| Batch number: 141600033A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| m-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 85 | | 64-111 | | |
| o-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 83 | | 75-125 | | |
| p-Terphenyl | 0.17 | U | 0.17 | 0.067 | mg/kg | 78 | | 69-109 | | |
| Batch number: 141600037A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 84 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 85 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 58 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 71 | | 60-115 | | |
| Batch number: 141600038A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 74* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 77* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 78 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 65 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 56* | | 60-115 | | |
| Batch number: 141600042A | Sample number(s): 7488113 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 59* | 50* | 67-109 | 16 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 92 | 88 | 71-119 | 4 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 91 | 88 | 75-117 | 3 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 78 | 61 | 44-134 | 24 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 21* | 15* | 55-86 | 32* | 30 |
| Batch number: 141600043A | Sample number(s): 7488113 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 52* | 44* | 67-109 | 16 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 82 | 78 | 71-119 | 5 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 85 | 81 | 75-117 | 5 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 83 | 69 | 44-134 | 17 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 16* | 12* | 55-86 | 34* | 30 |
| Batch number: 141600637001 | Sample number(s): 7488115-7488118 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 104 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 99 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 99 | | 80-120 | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 98 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 100 | | 80-120 | | |
| Calcium | 9.52 | J | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 100 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 101 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 102 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 102 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 101 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 102 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 102 | | 80-120 | | |
| Potassium | 100 | U | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 | U | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.47 | J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 100 | | 80-120 | | |
| Zinc | 0.541 | J | 4.00 | 0.200 | mg/kg | 101 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Batch number: 141600637001A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 106 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 141600637001B | Sample number(s): 7488115-7488118 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141600638001 | Sample number(s): 7488115-7488118 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 93 | | 85-120 | | |
| Batch number: 141640635001 | Sample number(s): 7488113 | | | | | | | | | |
| Aluminum | 0.400 | U | 0.400 | 0.0828 | mg/l | 109 | 106 | 90-112 | 3 | 20 |
| Antimony | 0.0400 | U | 0.0400 | 0.0053 | mg/l | 100 | 98 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 | U | 0.0400 | 0.0068 | mg/l | 110 | 108 | 90-113 | 1 | 20 |
| Barium | 0.0100 | U | 0.0100 | 0.00033 | mg/l | 108 | 107 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 | U | 0.0100 | 0.00067 | mg/l | 108 | 106 | 90-111 | 2 | 20 |
| Boron | 0.100 | U | 0.100 | 0.0084 | mg/l | 100 | 99 | 90-110 | 2 | 20 |
| Cadmium | 0.0100 | U | 0.0100 | 0.00076 | mg/l | 110 | 108 | 90-112 | 2 | 20 |
| Calcium | 0.400 | U | 0.400 | 0.0334 | mg/l | 109 | 106 | 90-112 | 2 | 20 |
| Chromium | 0.0300 | U | 0.0300 | 0.0016 | mg/l | 106 | 103 | 90-110 | 3 | 20 |
| Cobalt | 0.0100 | U | 0.0100 | 0.0013 | mg/l | 111 | 109 | 90-114 | 2 | 20 |
| Copper | 0.0200 | U | 0.0200 | 0.0027 | mg/l | 107 | 104 | 90-112 | 2 | 20 |
| Iron | 0.400 | U | 0.400 | 0.0430 | mg/l | 109 | 107 | 90-112 | 2 | 20 |
| Lead | 0.0300 | U | 0.0300 | 0.0047 | mg/l | 110 | 108 | 88-116 | 2 | 20 |
| Lithium | 0.0400 | U | 0.0400 | 0.0047 | mg/l | 108 | 105 | 90-110 | 3 | 20 |
| Magnesium | 0.200 | U | 0.200 | 0.0167 | mg/l | 108 | 106 | 89-110 | 2 | 20 |
| Manganese | 0.0014 | J | 0.0100 | 0.00083 | mg/l | 105 | 107 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Nickel | 0.0016 | J | 0.0200 | 0.0015 | mg/l | 113 | 111 | 90-117 | 2 | 20 |
| Phosphorus | 0.200 | U | 0.200 | 0.0418 | mg/l | 107 | 104 | 90-110 | 3 | 20 |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 1.00 | U | 1.00 | 0.0980 | mg/l | 105 | 102 | 90-110 | 3 | 20 |
| Sodium | 2.00 | U | 2.00 | 0.167 | mg/l | 105 | 102 | 87-114 | 3 | 20 |
| Tin | 0.0400 | U | 0.0400 | 0.0029 | mg/l | 106 | 103 | 90-110 | 2 | 20 |
| Titanium | 0.0200 | U | 0.0200 | 0.0017 | mg/l | 108 | 106 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 | U | 0.0100 | 0.0020 | mg/l | 110 | 108 | 90-110 | 2 | 20 |
| Zinc | 0.0047 | J | 0.0400 | 0.0020 | mg/l | 107 | 106 | 90-110 | 2 | 20 |
| Zirconium | 0.0094 | J | 0.100 | 0.0084 | mg/l | 107 | 104 | 90-110 | 3 | 20 |
| Batch number: 141640639001A | Sample number(s): 7488113 | | | | | | | | | |
| Silver | 0.0010 | U | 0.0010 | 0.00011 | mg/l | 103 | 103 | 90-115 | 1 | 20 |
| Strontium | 0.0020 | U | 0.0020 | 0.00034 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Thallium | 0.0010 | U | 0.0010 | 0.00015 | mg/l | 105 | 101 | 90-115 | 3 | 20 |
| Batch number: 141640639001B | Sample number(s): 7488113 | | | | | | | | | |
| Selenium | 0.0040 | U | 0.0040 | 0.00050 | mg/l | 101 | 101 | 90-114 | 0 | 20 |
| Batch number: 141645713003 | Sample number(s): 7488113 | | | | | | | | | |
| 3b Mercury 7470A | 0.00020 | U | 0.00020 | 0.00006 0 | mg/l | 98 | 94 | 90-115 | 4 | 20 |
| Batch number: 14156987301A | Sample number(s): 7488113 | | | | | | | | | |
| 2b Chromium VI by EPA 7199 | 10.0 | U | 10.0 | 5.0 | ug/l | 107 | 105 | 90-110 | 2 | 20 |
| Batch number: 14160243201A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 0.40 | U | 0.40 | 0.14 | mg/kg | 95 | | 80-120 | | |
| Batch number: 14156004101A | Sample number(s): 7488113 | | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 100 | | 90-110 | | |
| Batch number: 14156039402A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14169162401A | Sample number(s): 7488115-7488118 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14162001 | Sample number(s): 7488113 | | | | | | | | | |
| 2378-TCDD | 2.00 | U | 2.00 | 0.252 | pg/l | 101 | | 60-150 | | |
| 12378-PeCDD | 0.241 | J | 10.0 | 0.194 | pg/l | 97 | | 60-150 | | |
| 123478-HxCDD | 0.280 | J | 10.0 | 0.164 | pg/l | 96 | | 60-150 | | |
| 123678-HxCDD | 10.0 | U | 10.0 | 0.171 | pg/l | 94 | | 60-150 | | |
| 123789-HxCDD | 0.251 | J | 10.0 | 0.161 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDD | 0.811 | J | 10.0 | 0.181 | pg/l | 97 | | 60-150 | | |
| OCDD | 1.29 | J | 20.0 | 0.220 | pg/l | 94 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.174 | pg/l | 93 | | 60-150 | | |
| 12378-PeCDF | 0.172 | J | 10.0 | 0.107 | pg/l | 96 | | 60-150 | | |
| 23478-PeCDF | 0.109 | J | 10.0 | 0.0990 | pg/l | 98 | | 60-150 | | |
| 123478-HxCDF | 0.176 | J | 10.0 | 0.105 | pg/l | 100 | | 60-150 | | |
| 123678-HxCDF | 0.258 | J | 10.0 | 0.0950 | pg/l | 99 | | 60-150 | | |
| 123789-HxCDF | 0.465 | J | 10.0 | 0.109 | pg/l | 97 | | 60-150 | | |
| 234678-HxCDF | 0.399 | J | 10.0 | 0.0930 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDF | 0.621 | J | 10.0 | 0.0768 | pg/l | 99 | | 60-150 | | |
| 1234789-HpCDF | 0.299 | J | 10.0 | 0.111 | pg/l | 97 | | 60-150 | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| OCDF | 1.27 | J | 20.0 | 0.252 | pg/l | 96 | | 60-150 | | |
| Batch number: 14162002 | Sample number(s): 7488115-7488118 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0358 | ng/kg | 99 | | 67-158 | | |
| 12378-PeCDD | 0.102 | J | 5.00 | 0.0327 | ng/kg | 97 | | 70-142 | | |
| 123478-HxCDD | 5.00 | U | 5.00 | 0.0173 | ng/kg | 97 | | 70-164 | | |
| 123678-HxCDD | 0.0387 | J | 5.00 | 0.0180 | ng/kg | 93 | | 76-134 | | |
| 123789-HxCDD | 0.0242 | J | 5.00 | 0.0184 | ng/kg | 97 | | 64-162 | | |
| 1234678-HpCDD | 0.0740 | J | 5.00 | 0.0246 | ng/kg | 96 | | 70-140 | | |
| OCDD | 0.176 | J | 10.0 | 0.0333 | ng/kg | 91 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0294 | ng/kg | 100 | | 75-158 | | |
| 12378-PeCDF | 0.130 | J | 5.00 | 0.0164 | ng/kg | 96 | | 80-134 | | |
| 23478-PeCDF | 0.0960 | J | 5.00 | 0.0179 | ng/kg | 95 | | 68-160 | | |
| 123478-HxCDF | 0.122 | J | 5.00 | 0.0189 | ng/kg | 98 | | 72-134 | | |
| 123678-HxCDF | 0.0571 | J | 5.00 | 0.0164 | ng/kg | 100 | | 84-130 | | |
| 123789-HxCDF | 0.0757 | J | 5.00 | 0.0204 | ng/kg | 96 | | 78-130 | | |
| 234678-HxCDF | 0.0354 | J | 5.00 | 0.0181 | ng/kg | 96 | | 70-156 | | |
| 1234678-HpCDF | 0.0797 | J | 5.00 | 0.00952 | ng/kg | 94 | | 82-122 | | |
| 1234789-HpCDF | 0.0398 | J | 5.00 | 0.0205 | ng/kg | 97 | | 78-138 | | |
| OCDF | 0.0869 | J | 10.0 | 0.0448 | ng/kg | 97 | | 63-170 | | |
| Batch number: 14162001 | Sample number(s): 7488113 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.250 | | | | pg/l | | | | | |
| Batch number: 14162002 | Sample number(s): 7488115-7488118 | | | | | | | | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0448 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14163SLB026 | Sample number(s): 7488115-7488118 UNSPK: P492863 | | | | | | | | |
| Acenaphthene | 88 | 80 | 48-127 | 10 | 30 | | | | |
| Acenaphthylene | 82 | 75 | 60-128 | 10 | 30 | | | | |
| Anthracene | 83 | 75 | 52-126 | 11 | 30 | | | | |
| Benzo(a)anthracene | 86 | 79 | 44-143 | 8 | 30 | | | | |
| Benzo(a)pyrene | 82 | 74 | 49-137 | 10 | 30 | | | | |
| Benzo(b)fluoranthene | 105 | 95 | 26-142 | 10 | 30 | | | | |
| Benzo(e)pyrene | 84 | 77 | 63-111 | 9 | 30 | | | | |
| Benzo(g,h,i)perylene | 42 | 38 | 33-141 | 11 | 30 | | | | |
| Benzo(k)fluoranthene | 102 | 97 | 49-144 | 4 | 30 | | | | |
| Butylbenzylphthalate | 101 | 81 | 64-156 | 18 | 30 | | | | |
| Di-n-butylphthalate | 87 | 81 | 52-147 | 7 | 30 | | | | |
| Chrysene | 88 | 80 | 43-141 | 9 | 30 | | | | |
| Dibenz(a,h)anthracene | 51 | 46 | 25-145 | 9 | 30 | | | | |
| Diethylphthalate | 87 | 79 | 66-140 | 9 | 30 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Dimethylphthalate | 86 | 78 | 70-123 | 10 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 51 | 64 | 48-164 | 11 | 30 | | | | |
| Fluoranthene | 89 | 82 | 38-153 | 8 | 30 | | | | |
| Fluorene | 89 | 82 | 57-130 | 9 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 49 | 44 | 26-139 | 10 | 30 | | | | |
| 1-Methylnaphthalene | 85 | 77 | 59-139 | 9 | 30 | | | | |
| 2-Methylnaphthalene | 87 | 79 | 46-147 | 10 | 30 | | | | |
| Naphthalene | 86 | 78 | 52-136 | 9 | 30 | | | | |
| N-Nitrosodimethylamine | 61 | 55 | 39-134 | 10 | 30 | | | | |
| Di-n-octylphthalate | 115 | 109 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 85 | 77 | 50-137 | 10 | 30 | | | | |
| Pyrene | 75 | 69 | 26-143 | 8 | 30 | | | | |
| Batch number: 14163SLC026 | Sample number(s): 7488115-7488118 UNSPK: 7488116 | | | | | | | | |
| Aniline | 67 | 63 | 10-131 | 6 | 30 | | | | |
| Benzidine | 23* | 14* | 35-141 | 52* | 30 | | | | |
| Benzoic acid | 67 | 74 | 23-170 | 10 | 30 | | | | |
| Benzyl alcohol | 98 | 94 | 32-145 | 4 | 30 | | | | |
| 1,1'-Biphenyl | 88 | 84 | 64-120 | 4 | 30 | | | | |
| 4-Bromophenyl-phenylether | 94 | 91 | 66-122 | 3 | 30 | | | | |
| Carbazole | 87 | 84 | 63-126 | 4 | 30 | | | | |
| 4-Chloro-3-methylphenol | 91 | 88 | 61-131 | 3 | 30 | | | | |
| 4-Chloroaniline | 52 | 41 | 11-114 | 24 | 30 | | | | |
| bis(2-Chloroethoxy)methane | 85 | 82 | 58-122 | 4 | 30 | | | | |
| bis(2-Chloroethyl)ether | 86 | 83 | 66-122 | 3 | 30 | | | | |
| bis(2-Chloroisopropyl)ether | 83 | 81 | 50-115 | 2 | 30 | | | | |
| 2-Chloronaphthalene | 80 | 79 | 50-140 | 1 | 30 | | | | |
| 2-Chlorophenol | 90 | 89 | 71-130 | 1 | 30 | | | | |
| 4-Chlorophenyl-phenylether | 98 | 91 | 65-117 | 7 | 30 | | | | |
| Dibenzofuran | 94 | 85 | 65-124 | 10 | 30 | | | | |
| 1,2-Dichlorobenzene | 89 | 85 | 72-114 | 5 | 30 | | | | |
| 1,3-Dichlorobenzene | 87 | 82 | 67-118 | 6 | 30 | | | | |
| 1,4-Dichlorobenzene | 88 | 83 | 68-119 | 6 | 30 | | | | |
| 3,3'-Dichlorobenzidine | 58 | 56 | 10-143 | 4 | 30 | | | | |
| 2,4-Dichlorophenol | 96 | 94 | 54-135 | 2 | 30 | | | | |
| 2,4-Dimethylphenol | 89 | 84 | 62-132 | 6 | 30 | | | | |
| 3,5-Dimethylphenol | 116 | 114 | 70-130 | 1 | 30 | | | | |
| 4,6-Dinitro-2-methylphenol | 95 | 91 | 10-148 | 4 | 30 | | | | |
| 2,4-Dinitrophenol | 86 | 86 | 20-143 | 0 | 30 | | | | |
| 1,2-Diphenylhydrazine | 88 | 84 | 51-145 | 4 | 30 | | | | |
| Hexachlorobenzene | 99 | 97 | 46-132 | 2 | 30 | | | | |
| Hexachlorobutadiene | 97 | 90 | 65-125 | 7 | 30 | | | | |
| Hexachlorocyclopentadiene | 100 | 95 | 10-153 | 6 | 30 | | | | |
| Hexachloroethane | 82 | 80 | 24-138 | 3 | 30 | | | | |
| Isophorone | 92 | 88 | 68-119 | 4 | 30 | | | | |
| 2-Methylphenol | 91 | 90 | 62-133 | 1 | 30 | | | | |
| 4-Methylphenol | 86 | 85 | 59-132 | 1 | 30 | | | | |
| NDPA as diphenylamine | 90 | 87 | 70-130 | 4 | 30 | | | | |
| 2-Nitroaniline | 92 | 92 | 64-131 | 1 | 30 | | | | |
| 3-Nitroaniline | 84 | 81 | 31-145 | 4 | 30 | | | | |
| 4-Nitroaniline | 77 | 68 | 30-131 | 12 | 30 | | | | |
| Nitrobenzene | 86 | 81 | 63-125 | 6 | 30 | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 2-Nitrophenol | 93 | 89 | 45-146 | 5 | 30 | | | | |
| 4-Nitrophenol | 84 | 74 | 25-142 | 14 | 30 | | | | |
| N-Nitroso-di-n-propylamine | 82 | 81 | 58-126 | 1 | 30 | | | | |
| N-Nitrosodiphenylamine | 92 | 88 | 59-135 | 4 | 30 | | | | |
| Pentachlorophenol | 96 | 90 | 23-145 | 6 | 30 | | | | |
| Phenol | 88 | 87 | 61-130 | 1 | 30 | | | | |
| Pyridine | 74 | 76 | 16-108 | 3 | 30 | | | | |
| 1,2,3,4-Tetrahydronaphthalene | 30* | 37* | 70-130 | 19 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 95 | 91 | 66-116 | 5 | 30 | | | | |
| 2,4,5-Trichlorophenol | 94 | 92 | 64-131 | 3 | 30 | | | | |
| 2,4,6-Trichlorophenol | 97 | 94 | 60-136 | 3 | 30 | | | | |
| Batch number: 14164A16A | Sample number(s): 7488116,7488118 UNSPK: P494363 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 80 | 80 | 69-123 | 6 | 30 | | | | |
| Batch number: 141610011A | Sample number(s): 7488115-7488118 UNSPK: 7488115 | | | | | | | | |
| 4-Amino-2,6-Dinitrotoluene | 110 | 97 | 85-118 | 13 | 50 | | | | |
| 2-Amino-4,6-Dinitrotoluene | 92 | 81 | 69-113 | 12 | 50 | | | | |
| 1,3-Dinitrobenzene | 99 | 89 | 89-119 | 10 | 50 | | | | |
| 2,4-Dinitrotoluene | 99 | 89 | 81-111 | 11 | 50 | | | | |
| 2,6-Dinitrotoluene | 98 | 86 | 86-114 | 13 | 50 | | | | |
| HMX | 73 | 64* | 72-107 | 13 | 50 | | | | |
| Nitrobenzene | 97 | 86 | 86-108 | 12 | 50 | | | | |
| Nitroglycerin | 199* | 174* | 73-116 | 13 | 50 | | | | |
| 2-Nitrotoluene | 99 | 89 | 79-112 | 10 | 50 | | | | |
| 3-Nitrotoluene | 94 | 86 | 72-119 | 9 | 50 | | | | |
| 4-Nitrotoluene | 92 | 82* | 90-118 | 11 | 50 | | | | |
| PETN | 179* | 162* | 71-133 | 10 | 50 | | | | |
| RDX | 87 | 77 | 75-108 | 12 | 50 | | | | |
| Tetryl | 86 | 77 | 58-125 | 11 | 50 | | | | |
| 1,3,5-Trinitrobenzene | 101 | 90 | 58-135 | 11 | 50 | | | | |
| 2,4,6-Trinitrotoluene | 97 | 86* | 92-114 | 12 | 50 | | | | |
| Batch number: 141560024A | Sample number(s): 7488115-7488118 UNSPK: P485078 | | | | | | | | |
| 2,4-D | 138 | 133 | 42-143 | 3 | 35 | | | | |
| Dalapon | 80 | 79 | 16-98 | 1 | 50 | | | | |
| 2,4-DB | 130 | 128 | 10-179 | 1 | 50 | | | | |
| Dicamba | 123 | 124 | 47-150 | 0 | 50 | | | | |
| Dinoseb | 20 | 22 | 10-115 | 10 | 35 | | | | |
| 2,4-DP (Dichlorprop) | 168 | 167 | 32-171 | 1 | 50 | | | | |
| MCPA | 112 | 107 | 54-138 | 5 | 50 | | | | |
| MCPP (Mecoprop) | 108 | 106 | 46-138 | 2 | 50 | | | | |
| 2,4,5-T | 155 | 149 | 12-172 | 3 | 35 | | | | |
| 2,4,5-TP | 137 | 139 | 65-156 | 2 | 35 | | | | |
| Batch number: 141580001A | Sample number(s): 7488115-7488118 UNSPK: 7488115 | | | | | | | | |
| 6a Perchlorate (Method 6850) | 104 | 102 | 80-120 | 2 | 20 | | | | |
| Batch number: 141600002A | Sample number(s): 7488113 UNSPK: 7488113 | | | | | | | | |
| 6b Perchlorate (Method 6850) | 97 | 97 | 80-120 | 0 | 20 | | | | |
| Batch number: 141580004A | Sample number(s): 7488115-7488118 UNSPK: P485078 | | | | | | | | |

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# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Aldrin | 97 | 91 | 16-126 | 5 | 50 | | | | |
| Alpha BHC | 82 | 82 | 14-140 | 1 | 50 | | | | |
| Beta BHC | 102 | 95 | 42-133 | 7 | 50 | | | | |
| Gamma BHC - Lindane | 100 | 95 | 30-137 | 5 | 50 | | | | |
| p,p-DDD | 103 | 100 | 43-149 | 2 | 50 | | | | |
| p,p-DDE | 99 | 94 | 35-152 | 4 | 50 | | | | |
| p,p-DDT | 98 | 92 | 12-193 | 6 | 50 | | | | |
| Delta BHC | 109 | 102 | 13-153 | 6 | 50 | | | | |
| Dieldrin | 104 | 100 | 41-153 | 4 | 50 | | | | |
| Endosulfan I | 82 | 79 | 26-146 | 3 | 50 | | | | |
| Endosulfan II | 97 | 92 | 34-141 | 5 | 50 | | | | |
| Endosulfan Sulfate | 111 | 106 | 10-181 | 3 | 50 | | | | |
| Endrin | 93 | 88 | 30-152 | 4 | 50 | | | | |
| Endrin Aldehyde | 100 | 95 | 23-138 | 4 | 50 | | | | |
| Endrin Ketone | 105 | 101 | 30-148 | 3 | 50 | | | | |
| Heptachlor | 84 | 80 | 16-152 | 5 | 50 | | | | |
| Heptachlor Epoxide | 102 | 98 | 33-144 | 4 | 50 | | | | |
| Methoxychlor | 100 | 94 | 41-161 | 6 | 50 | | | | |
| Batch number: 141580012A | Sample number(s): 7488115-7488118 UNSPK: 7488115 | | | | | | | | |
| PCB-1016 | 116 | 114 | 41-135 | 1 | 50 | | | | |
| PCB-1260 | 120 | 120 | 40-134 | 0 | 50 | | | | |
| Batch number: 141600045A | Sample number(s): 7488113 UNSPK: 7488113 | | | | | | | | |
| Diethylene glycol | 86 | 102 | 50-166 | 18 | 20 | | | | |
| Ethylene glycol | 84 | 104 | 50-155 | 22* | 20 | | | | |
| Propylene glycol | 86 | 110 | 54-145 | 24* | 20 | | | | |
| Triethylene glycol | 80 | 98 | 50-133 | 21* | 20 | | | | |
| Batch number: 141620008A | Sample number(s): 7488115-7488118 UNSPK: 7488115 | | | | | | | | |
| Diethylene glycol | 12* | 15* | 59-109 | 22* | 20 | | | | |
| Ethylene glycol | 64 | 78 | 63-107 | 20 | 20 | | | | |
| Propylene glycol | 76 | 92 | 63-107 | 19 | 20 | | | | |
| Triethylene glycol | 0* | 4* | 66-122 | 200* | 20 | | | | |
| Batch number: 141600033A | Sample number(s): 7488115-7488118 UNSPK: 7488115 | | | | | | | | |
| m-Terphenyl | 339* | 93 | 75-125 | 105* | 20 | | | | |
| o-Terphenyl | 83 | 81 | 75-125 | 2 | 20 | | | | |
| p-Terphenyl | 181* | 80 | 75-125 | 61* | 20 | | | | |
| Batch number: 141600037A | Sample number(s): 7488115-7488118 UNSPK: P489904 | | | | | | | | |
| EFH (C12-C14) | 94 | 90 | 49-123 | 4 | 20 | | | | |
| EFH (C15-C20) | 91 | 92 | 49-123 | 1 | 20 | | | | |
| EFH (C21-C30) | 100 | 101 | 49-123 | 0 | 20 | | | | |
| EFH (C30-C40) | 134* | 156* | 49-123 | 5 | 20 | | | | |
| EFH (C8-C11) | 94 | 101 | 49-123 | 7 | 20 | | | | |
| Batch number: 141600038A | Sample number(s): 7488115-7488118 UNSPK: P489904 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 71 | 76 | 49-123 | 6 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 75 | 79 | 49-123 | 5 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 77 | 83 | 49-123 | 6 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 77 | 87 | 49-123 | 10 | 20 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| EFH C8-C11 w/ SiGel | 54 | 58 | 49-123 | 8 | 20 | | | | |
| Batch number: 141600637001 | Sample number(s): 7488115-7488118 UNSPK: 7488115 BKG: 7488115 | | | | | | | | |
| Aluminum | 2266 (2) | 2288 (2) | 75-125 | 1 | 20 | 17,900 | 18,700 | 5 | 20 |
| Antimony | 34* | 35* | 75-125 | 5 | 20 | 3.85 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 103 | 100 | 75-125 | 0 | 20 | 2.25 J | 2.75 J | 20 (1) | 20 |
| Barium | 103 | 105 | 75-125 | 3 | 20 | 102 | 107 | 5 | 20 |
| Beryllium | 103 | 103 | 75-125 | 3 | 20 | 0.698 J | 0.751 J | 7 (1) | 20 |
| Boron | 99 | 99 | 75-125 | 3 | 20 | 7.62 J | 7.18 J | 6 (1) | 20 |
| Cadmium | 94 | 93 | 75-125 | 2 | 20 | 0.283 J | 0.244 J | 15 (1) | 20 |
| Calcium | 111 (2) | 103 (2) | 75-125 | 0 | 20 | 3,180 | 3,190 | 0 | 20 |
| Chromium | 109 | 106 | 75-125 | 0 | 20 | 20.5 | 21.5 | 5 | 20 |
| Cobalt | 93 | 92 | 75-125 | 2 | 20 | 5.97 | 6.34 | 6 | 20 |
| Copper | 106 | 106 | 75-125 | 2 | 20 | 9.57 | 9.78 | 2 (1) | 20 |
| Iron | 1070 (2) | 177 (2) | 75-125 | 4 | 20 | 21,800 | 23,200 | 6 | 20 |
| Lead | 90 | 88 | 75-125 | 0 | 20 | 9.34 | 10.0 | 7 (1) | 20 |
| Lithium | 102 | 102 | 75-125 | 3 | 20 | 19.4 | 20.1 | 4 | 20 |
| Magnesium | 184 (2) | 131 (2) | 75-125 | 2 | 20 | 4,130 | 4,210 | 2 | 20 |
| Manganese | 104 (2) | 96 (2) | 75-125 | 1 | 20 | 317 | 346 | 9 | 20 |
| Molybdenum | 93 | 92 | 75-125 | 3 | 20 | 0.438 J | 0.276 J | 45* (1) | 20 |
| Nickel | 96 | 95 | 75-125 | 1 | 20 | 11.7 | 11.9 | 2 | 20 |
| Phosphorus | 89 | 76 | 75-125 | 3 | 20 | 229 | 230 | 0 | 20 |
| Potassium | 125 | 121 | 75-125 | 0 | 20 | 2,790 | 2,770 | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 3 | 20 | 78.9 J | 79.0 J | 0 (1) | 20 |
| Tin | 87 | 86 | 75-125 | 2 | 20 | 3.21 J | 3.28 J | 2 (1) | 20 |
| Titanium | 337 (2) | 359 (2) | 75-125 | 2 | 20 | 991 | 1,020 | 3 | 20 |
| Vanadium | 110 | 110 | 75-125 | 2 | 20 | 38.8 | 41.4 | 6 | 20 |
| Zinc | 94 | 91 | 75-125 | 0 | 20 | 49.1 | 48.3 | 2 | 20 |
| Zirconium | 97 | 97 | 75-125 | 3 | 20 | 3.68 J | 4.36 J | 17 (1) | 20 |
| Batch number: 141600637001A | Sample number(s): 7488115-7488118 UNSPK: 7488115 BKG: 7488115 | | | | | | | | |
| Silver | 107 | 105 | 75-125 | 1 | 20 | 0.0373 J | 0.0429 J | 14 (1) | 20 |
| Strontium | 92 | 86 | 75-125 | 1 | 20 | 21.7 | 24.5 | 12 | 20 |
| Thallium | 110 | 104 | 75-125 | 1 | 20 | 0.288 | 0.341 | 17 (1) | 20 |
| Batch number: 141600637001B | Sample number(s): 7488115-7488118 UNSPK: 7488115 BKG: 7488115 | | | | | | | | |
| Selenium | 101 | 96 | 75-125 | 2 | 20 | 0.288 J | 0.324 J | 12 (1) | 20 |
| Batch number: 141600638001 | Sample number(s): 7488115-7488118 UNSPK: 7488115 BKG: 7488115 | | | | | | | | |
| 3a Mercury 7471A | 102 | 103 | 65-135 | 3 | 20 | 0.0155 U | 0.0164 U | 0 (1) | 20 |
| Batch number: 14160243201A | Sample number(s): 7488115-7488118 UNSPK: 7488116 BKG: 7488116 | | | | | | | | |
| 2a Chromium VI by EPA 7199 | 88 | | 75-125 | | | 0.40 U | 0.41 U | 0 (1) | 20 |
| Batch number: 14156004101A | Sample number(s): 7488113 BKG: P486472 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 7.6 | 7.7 | 0 | 3 |
| Batch number: 14156039402A | Sample number(s): 7488115-7488118 BKG: 7488115 | | | | | | | | |
| 15a pH by 9045D | | | | | | 7.77 | 7.75 | 0 | 3 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14169162401A | Sample number(s): 7488115-7488118 | | | | | BKG: P494357 | | | |
| 14a Moisture Content by 160.3 | | | | | | 6.6 | 7.9 | 18 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14161WAH026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7488113 | 106 | 111 | 95 |
| Blank | 105 | 110 | 90 |
| LCS | 103 | 111 | 87 |
| LCSD | 102 | 110 | 87 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 8b SVOCs by EPA 8270D
Batch number: 14161WAI026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7488113 | 47 | 69 | 91 | 97 | 93 | 103 |
| Blank | 51 | 75 | 104 | 115 | 105 | 119 |
| LCS | 50 | 68 | 93 | 97 | 92 | 101 |
| LCSD | 47 | 63 | 88 | 95 | 86 | 87 |
| Limits: | 20-110 | 20-110 | 30-110 | 40-130 | 45-130 | 45-130 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14163SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7488115 | 81 | 87 | 74 |
| 7488116 | 98 | 104 | 87 |
| 7488117 | 96 | 101 | 87 |
| 7488118 | 89 | 98 | 81 |
| Blank | 94 | 101 | 87 |
| LCS | 100 | 106 | 92 |
| MS | 90 | 97 | 85 |
| MSD | 82 | 91 | 77 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 8a SVOCs by EPA 8270D

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Surrogate Quality Control

Batch number: 14163SLC026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---|---|---|---|---|---|---|
| 7488115 | 87 | 97 | 92 | 86 | 87 | 100 |
| 7488116 | 67 | 78 | 78 | 69 | 75 | 86 |
| 7488117 | 74 | 84 | 86 | 72 | 79 | 84 |
| 7488118 | 75 | 87 | 88 | 76 | 76 | 91 |
| Blank | 75 | 88 | 87 | 79 | 83 | 95 |
| LCS | 82 | 95 | 93 | 80 | 87 | 91 |
| LCSD | 77 | 87 | 89 | | | |
| MS | 83 | 97 | 98 | 83 | 89 | 97 |
| MSD | 82 | 95 | 95 | 80 | 87 | 95 |
| Limits: | 25-120 | 25-130 | 35-130 | 40-130 | 45-130 | 45-130 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14157A94A

| | Trifluorotoluene-F |
|---|---|
| 7488113 | 90 |
| Blank | 86 |
| LCS | 94 |
| LCSD | 93 |
| Limits: | 63-135 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14163A94A

| | Trifluorotoluene-F |
|---|---|
| 7488114 | 86 |
| Blank | 85 |
| LCS | 92 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14164A16A

| | Trifluorotoluene-F |
|---|---|
| 7488116 | 95 |
| 7488118 | 88 |
| Blank | 101 |
| LCS | 94 |
| MS | 81 |
| MSD | 75 |
| Limits: | 50-142 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 141560024A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7488115 | 89 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7488116 | 98 | |
| 7488117 | 96 | |
| 7488118 | 90 | |
| Blank | 61 | |
| LCS | 115 | |
| MS | 111 | |
| MSD | 109 | |
| Limits: | 50-150 | |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141580004A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7488115 | 85 | 98 |
| 7488116 | 84 | 98 |
| 7488117 | 88 | 103 |
| 7488118 | 77 | 90 |
| Blank | 98 | 105 |
| LCS | 89 | 99 |
| MS | 98 | 108 |
| MSD | 93 | 105 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141580012A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7488115 | 126* | 119 |
| 7488116 | 122* | 111 |
| 7488117 | 120 | 114 |
| 7488118 | 126* | 121* |
| Blank | 123* | 116 |
| LCS | 118 | 112 |
| LCSD | 124* | 116 |
| MS | 121* | 115 |
| MSD | 120 | 115 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 24b Herbicides by EPA 8151A
Batch number: 141600003A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7488113 | 87 |
| Blank | 84 |
| LCS | 104 |
| LCSD | 111 |
| Limits: | 50-150 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141610003A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7488113 | 90 | 84 |
| Blank | 91 | 86 |
| LCS | 99 | 90 |
| LCSD | 100 | 87 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 22b Pesticides by EPA 8081B
Batch number: 141610004A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7488113 | 115 | 106 |
| Blank | 101 | 95 |
| LCS | 84 | 80 |
| LCSD | 74 | 61 |
| Limits: | 60-140 | 20-120 |

Analysis Name: 18b Energetics by 8330A
Batch number: 141610009A

| | 2-Nitro-m-xylene |
|---|---|
| 7488113 | 107 |
| Blank | 94 |
| LCS | 111 |
| LCSD | 80 |
| Limits: | 80-146 |

Analysis Name: 24a Energetics by 8330A
Batch number: 141610011A

| | 2-Nitro-m-xylene |
|---|---|
| 7488115 | 106 |
| 7488116 | 104 |
| 7488117 | 117 |
| 7488118 | 95 |
| Blank | 109 |
| LCS | 101 |
| LCSD | 95 |
| MS | 102 |
| MSD | 93 |
| Limits: | 80-146 |

Analysis Name: 23b Terphenyls by 8015B
Batch number: 141600016A

| | n-Triacontane-d62 |
|---|---|
| 7488113 | 98 |
| Blank | 107 |
| LCS | 103 |
| LCSD | 101 |
| Limits: | 36-160 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Surrogate Quality Control

Analysis Name: 27a Terphenyls by 8015B
Batch number: 141600033A

| | n-Triacontane-d62 |
|---|---|
| 7488115 | 97 |
| 7488116 | 98 |
| 7488117 | 90 |
| 7488118 | 102 |
| Blank | 91 |
| LCS | 97 |
| MS | 95 |
| MSD | 99 |
| Limits: | 19-152 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141600037A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7488115 | 83 | 88 |
| 7488116 | 88 | 94 |
| 7488117 | 91 | 97 |
| 7488118 | 94 | 92 |
| Blank | 70 | 84 |
| LCS | 82 | 84 |
| MS | 84 | 90 |
| MSD | 82 | 86 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141600038A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7488115 | 64 | 72 |
| 7488116 | 70 | 77 |
| 7488117 | 73 | 84 |
| 7488118 | 68 | 76 |
| Blank | 65 | 83 |
| LCS | 67 | 76 |
| MS | 66 | 74 |
| MSD | 74 | 86 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141600042A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7488113 | 76 | 81 |
| Blank | 75 | 78 |
| LCS | 81 | 84 |
| LCSD | 76 | 80 |
| Limits: | 45-126 | 69-119 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Surrogate Quality Control

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141600043A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7488113 | 68 | 84 |
| Blank | 67 | 81 |
| LCS | 68 | 77 |
| LCSD | 62 | 73 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 20b Glycols by EPA 8015C
Batch number: 141600045A

| | Tetramethylene glycol |
|---|---|
| 7488113 | 99 |
| Blank | 98 |
| LCS | 110 |
| MS | 108 |
| MSD | 120 |
| Limits: | 58-141 |

Analysis Name: 26a Glycols by EPA 8015C
Batch number: 141620008A

| | Tetramethylene glycol |
|---|---|
| 7488115 | 90 |
| 7488116 | 90 |
| 7488117 | 90 |
| 7488118 | 88 |
| Blank | 72* |
| LCS | 98 |
| MS | 95 |
| MSD | 92 |
| Limits: | 75-116 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14162001

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7488113 | 91 | 85 | 86 | 87 | 85 | 77 |
| Blank | 83 | 93 | 95 | 97 | 95 | 84 |
| OPR | 76 | 91 | 89 | 90 | 88 | 80 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7488113 | 60 | 84 | 91 | 87 | 87 | 91 |
| Blank | 70 | 85 | 97 | 95 | 96 | 101 |
| OPR | 67 | 76 | 90 | 91 | 86 | 89 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479557
Reported: 07/07/14 at 12:04 PM

## Surrogate Quality Control

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7488113 | 86 | 99 | 85 | 67 | 55 |
| Blank | 98 | 99 | 95 | 75 | 63 |
| OPR | 87 | 86 | 85 | 72 | 60 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14162002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7488115 | 70 | 62 | 72 | 75 | 72 | 70 |
| 7488116 | 53 | 58 | 66 | 69 | 65 | 64 |
| 7488117 | 78 | 71 | 79 | 81 | 77 | 74 |
| 7488118 | 84 | 78 | 86 | 89 | 85 | 79 |
| Blank | 57 | 63 | 67 | 70 | 66 | 61 |
| OPR | 68 | 71 | 76 | 76 | 75 | 67 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7488115 | 59 | 62 | 68 | 56 | 62 | 73 |
| 7488116 | 53 | 48 | 60 | 51 | 53 | 64 |
| 7488117 | 61 | 64 | 75 | 64 | 66 | 78 |
| 7488118 | 65 | 70 | 89 | 72 | 75 | 90 |
| Blank | 48 | 53 | 69 | 58 | 62 | 74 |
| OPR | 53 | 58 | 75 | 67 | 66 | 77 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7488115 | 62 | 68 | 90 | 48 | 42 |
| 7488116 | 56 | 57 | 79 | 42 | 39 |
| 7488117 | 68 | 70 | 94 | 50 | 43 |
| 7488118 | 77 | 77 | 100 | 56 | 50 |
| Blank | 61 | 64 | 79 | 44 | 35 |
| OPR | 68 | 69 | 84 | 50 | 40 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

A-13013
G-1479557
S-7488113-18

**CDM Smith**

DateShipped: 6/4/2014
CarrierName: FedEx
AirbillNo: 770197160010

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140604-06
Cooler #: 3
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Water) | Mercury 7471 (Soil) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB3-060414 | 6/4/14 10:30 | WQ | None | 6 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | X | | | | | | | | | X | | | | | | | | | | | |
| EB3-060414 | 6/4/14 10:30 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel cleanup required on half the extract. Analyze both for EFH.

**Sampler:** Andrew Pam

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 06/04/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 6-5-14 | 915 |

Trench Sampling 1 of 3

# SSFL Phase 3 Chain of Custody

**CDM Smith**

A-13013
G-1479557
S-7488113-18

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 6/4/2014 | Contact Name: | Pam Hartman | COC No: | 20140604-07 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 4 |
| AirbillNo: | 770197160010 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB3-060414 | 6/4/14 10:30 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB3-060414 | 6/4/14 10:30 | WQ | None | 4 - 250 mL Amber | 10 day | | | | | X | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| EB3-060414 | 6/4/14 10:30 | WQ | None | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | X | | | | | | | | | | X | | | | | | | | | | | | | | |
| EB3-060414 | 6/4/14 10:30 | WQ | None | 2 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | |
| EB3-060414 | 6/4/14 10:30 | WQ | HCl | 1 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| EB3-060414 | 6/4/14 10:30 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions:

**Sampler:** Andy Pam

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 06/04/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 6.5.14 | 915 |

Trench Sampling 2 of 3

# SSFL Phase 3 Chain of Custody

A-13013
G-1479557
S-7488113-18

**CDM Smith**

DateShipped: 6/4/2014
CarrierName: FedEx
AirbillNo: 770197160010

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140604-08
Cooler #: 2
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-060414 | 6/4/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SL-655-SA5C-TR-0.5 | 6/4/14 07:45 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | | X | X | | X | X | X | | | X | X | | X | | X | | | | | | | | | |
| SL-655-SA5C-TR-5.0 | 6/4/14 08:00 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | | X | X | | X | X | X | | | X | X | | X | | X | | | | | | | | | |
| SL-655-SA5C-TR-5.0 | 6/4/14 08:00 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| SL-646-SA5C-TR-0.5 | 6/4/14 11:30 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | | X | X | | X | X | X | | | X | X | | X | | X | | | | | | | | | |
| SL-646-SA5C-TR-5.0 | 6/4/14 11:45 | SO | None | 2 - 16 oz glass | 10 day | X | X | | | X | | X | | X | X | | | X | X | | X | X | X | | | X | X | | X | | X | | | | | | | | | |
| SL-646-SA5C-TR-5.0 | 6/4/14 11:45 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |

For all EFH, silica gel cleanup required on half the extract. Analyze both for EFH.

Special Instructions:

**Sampler:** Andrew Payne

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stefan Myers | 6/04/14 | 1000 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | Bruce Hu | 6.5.14 | 915 |

Trench Sampling 3 of 3

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16484

Group Number(s): 1479557

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/05/2014 9:15 |
| Number of Packages: | 4 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 11:15 on 06/05/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.2 | DT | Wet | Y | Bagged | N | N |
| 2 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |
| 3 | DT146 | 1.5 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/06/2014
Group Number: 1479940
SDG: PH219
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-060514 Water | 7489860 |
| SVL-552-SA5A-SB-1.5-2.0 Soil | 7489861 |
| SVL-554-SA5A-SB-1.5-2.0 Soil | 7489862 |
| SVL-529-SA5A-SB-4.0-4.5 Soil | 7489863 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB2-060514 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7489860**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 08:00

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB265 SDG#: PH219-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-060514 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7489860**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 08:00

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB265 SDG#: PH219-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141621AA | 06/11/2014 10:42 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141621AA | 06/11/2014 10:42 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-552-SA5A-SB-1.5-2.0 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7489861**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 11:38 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55215 SDG#: PH219-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.05 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.05 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.05 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.05 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.05 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.05 |
| 10237 | t-Butyl alcohol | 75-65-0 | 55 | U | 55 | 22 | 1.05 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.05 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.05 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.05 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.05 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.05 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.05 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.05 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.05 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.05 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.05 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.05 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.05 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.05 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-552-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7489861**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 11:38 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55215 SDG#: PH219-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.05 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.05 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.05 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.05 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.05 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.05 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.05 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.05 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.05 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.05 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.05 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.05 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 22:37 | Chelsea B Stong | 1.05 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415734733 | 06/06/2014 15:37 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-552-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7489861**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 11:38 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55215 SDG#: PH219-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415734733 | 06/06/2014 15:37 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415734733 | 06/06/2014 15:12 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401B | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-554-SA5A-SB-1.5-2.0 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7489862**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 12:46 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55415 SDG#: PH219-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 1.04 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.04 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.04 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.04 |
| 10237 | t-Butyl alcohol | 75-65-0 | 54 | U | 54 | 22 | 1.04 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.04 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-554-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7489862**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 12:46 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55415 SDG#: PH219-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.04 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.04 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.04 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.04 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 23:00 | Chelsea B Stong | 1.04 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415734733 | 06/06/2014 15:37 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-554-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7489862**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 12:46 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55415 SDG#: PH219-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415734733 | 06/06/2014 15:37 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415734733 | 06/06/2014 15:14 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401B | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-529-SA5A-SB-4.0-4.5 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7489863**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:04 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52940 SDG#: PH219-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 1.01 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 1.01 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 1.01 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.01 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.01 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 1.01 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.01 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.01 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-529-SA5A-SB-4.0-4.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7489863**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:04 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52940 SDG#: PH219-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.01 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.01 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.01 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.01 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.01 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.01 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.5 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/10/2014 23:22 | Chelsea B Stong | 1.01 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415734733 | 06/06/2014 15:37 | Lisa J Cooke | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-529-SA5A-SB-4.0-4.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7489863**
**LL Group # 1479940**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:04 by VV

Submitted: 06/06/2014 09:15
Reported: 07/07/2014 12:13

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52940 SDG#: PH219-04*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415734733 | 06/06/2014 15:37 | Lisa J Cooke | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415734733 | 06/06/2014 15:16 | Lisa J Cooke | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401B | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479940
Reported: 07/07/14 at 12:13 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141612AA | Sample number(s): 7489861-7489863 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 106 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 88 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 103 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 99 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 106 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 113 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 99 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 106 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 101 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 121 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 96 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 107 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 110 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 100 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 87 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 111 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 81 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 103 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 79 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 99 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 105 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 106 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 107 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 105 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 109 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 116 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 113 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 99 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 110 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479940
Reported: 07/07/14 at 12:13 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 112 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 100 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 103 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 105 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 104 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 94 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 95 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 104 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 115 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 108 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 102 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 117 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 102 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 103 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 99 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 98 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 94 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 96 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 108 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 103 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 104 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 65 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 107 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| Batch number: Y141621AA | Sample number(s): 7489860 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 93 | 93 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 73 | 74 | 52-129 | 0 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 93 | 93 | 62-120 | 1 | 30 |
| t-Amyl methyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 75-120 | 2 | 30 |
| Benzene | 1 | U | 1. | 0.5 | ug/l | 95 | 98 | 78-120 | 2 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 99 | 100 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 73-120 | 2 | 30 |
| Bromoform | 4 | U | 4. | 0.5 | ug/l | 87 | 87 | 61-120 | 1 | 30 |
| Bromomethane | 1 | U | 1. | 0.5 | ug/l | 101 | 103 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 89 | 89 | 54-133 | 0 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 98 | 97 | 75-120 | 0 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 89 | 91 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 96 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 90 | 91 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 | U | 1. | 0.5 | ug/l | 103 | 104 | 74-130 | 1 | 30 |
| Chlorobenzene | 1 | U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479940
Reported: 07/07/14 at 12:13 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 1 | U | 1. | 0.5 | ug/l | 93 | 97 | 56-120 | 5 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 105 | 108 | 54-126 | 3 | 30 |
| Chloroform | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 81 | 84 | 80-120 | 3 | 30 |
| Chloromethane | 1 | U | 1. | 0.5 | ug/l | 101 | 106 | 63-120 | 5 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 55 | 54 | 47-120 | 1 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 86 | 86 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 95 | 96 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 97 | 98 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 1 | U | 1. | 0.5 | ug/l | 103 | 103 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 98 | 80-120 | 6 | 30 |
| 1,2-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 100 | 103 | 65-135 | 3 | 30 |
| 1,1-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 109 | 111 | 76-124 | 2 | 30 |
| cis-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 113 | 115 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 80-120 | 3 | 30 |
| 1,3-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 98 | 97 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 101 | 103 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 92 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 92 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 97 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 98 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 98 | 100 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 87 | 91 | 51-125 | 4 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 88 | 88 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 109 | 75-128 | 2 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 108 | 108 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 90 | 91 | 51-124 | 1 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 107 | 109 | 80-120 | 2 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 89 | 89 | 70-120 | 1 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 103 | 107 | 80-120 | 4 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 90 | 94 | 58-126 | 3 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 96 | 65-120 | 2 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 89 | 90 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 102 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 65-130 | 1 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 94 | 94 | 76-120 | 0 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 77 | 76 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479940
Reported: 07/07/14 at 12:13 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 99 | 103 | 63-120 | 3 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 94 | 97 | 80-120 | 3 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Batch number: 14162162401B | Sample number(s): 7489861-7489863 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141612AA | Sample number(s): 7489861-7489863 UNSPK: P488099 | | | | | | | | |
| Acetone | 89 | 96 | 31-195 | 6 | 30 | | | | |
| Acrolein | 85 | 89 | 10-165 | 4 | 30 | | | | |
| Acrylonitrile | 87 | 85 | 48-139 | 4 | 30 | | | | |
| t-Amyl methyl ether | 94 | 97 | 50-132 | 2 | 30 | | | | |
| Benzene | 105 | 105 | 55-143 | 1 | 30 | | | | |
| Bromobenzene | 103 | 103 | 43-139 | 1 | 30 | | | | |
| Bromochloromethane | 124 | 115 | 60-137 | 9 | 30 | | | | |
| Bromodichloromethane | 97 | 97 | 53-136 | 1 | 30 | | | | |
| Bromoform | 93 | 91 | 50-144 | 4 | 30 | | | | |
| Bromomethane | 111 | 112 | 42-168 | 0 | 30 | | | | |
| 2-Butanone | 81 | 86 | 37-163 | 4 | 30 | | | | |
| t-Butyl alcohol | 126 | 123 | 47-153 | 4 | 30 | | | | |
| n-Butylbenzene | 97 | 99 | 30-146 | 1 | 30 | | | | |
| sec-Butylbenzene | 103 | 104 | 33-157 | 1 | 30 | | | | |
| tert-Butylbenzene | 105 | 107 | 41-152 | 0 | 30 | | | | |
| Carbon Disulfide | 112 | 111 | 48-146 | 2 | 30 | | | | |
| Carbon Tetrachloride | 114 | 114 | 51-165 | 1 | 30 | | | | |
| Chlorobenzene | 105 | 103 | 49-135 | 3 | 30 | | | | |
| Chloroethane | 107 | 106 | 39-152 | 3 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 70 | 78 | 32-139 | 9 | 30 | | | | |
| Chloroform | 108 | 108 | 61-142 | 1 | 30 | | | | |
| 1-Chlorohexane | 94 | 98 | 70-130 | 2 | 30 | | | | |
| Chloromethane | 109 | 112 | 36-143 | 1 | 30 | | | | |
| 2-Chlorotoluene | 104 | 103 | 42-146 | 2 | 30 | | | | |
| 4-Chlorotoluene | 105 | 105 | 39-145 | 2 | 30 | | | | |
| Chlorotrifluoroethene | 91 | 108 | 70-130 | 16 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 85 | 88 | 34-165 | 1 | 30 | | | | |
| Dibromochloromethane | 105 | 98 | 51-128 | 8 | 30 | | | | |
| 1,2-Dibromoethane | 100 | 99 | 54-129 | 2 | 30 | | | | |
| Dibromomethane | 94 | 98 | 57-130 | 2 | 30 | | | | |
| 1,2-Dichlorobenzene | 97 | 100 | 36-133 | 2 | 30 | | | | |
| 1,3-Dichlorobenzene | 101 | 103 | 34-134 | 1 | 30 | | | | |
| 1,4-Dichlorobenzene | 101 | 101 | 35-136 | 1 | 30 | | | | |
| Dichlorodifluoromethane | 123 | 123 | 26-151 | 1 | 30 | | | | |
| 1,1-Dichloroethane | 103 | 103 | 63-142 | 1 | 30 | | | | |
| 1,2-Dichloroethane | 103 | 106 | 54-143 | 2 | 30 | | | | |
| 1,1-Dichloroethene | 121 | 119 | 61-149 | 3 | 30 | | | | |
| cis-1,2-Dichloroethene | 106 | 108 | 67-135 | 0 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479940
Reported: 07/07/14 at 12:13 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | 120 | 112 | 64-144 | 8 | 30 | | | | |
| 1,2-Dichloropropane | 98 | 98 | 54-144 | 1 | 30 | | | | |
| 1,3-Dichloropropane | 96 | 95 | 51-140 | 2 | 30 | | | | |
| 2,2-Dichloropropane | 109 | 111 | 53-147 | 0 | 30 | | | | |
| 1,1-Dichloropropene | 113 | 114 | 54-145 | 1 | 30 | | | | |
| cis-1,3-Dichloropropene | 94 | 96 | 45-137 | 1 | 30 | | | | |
| trans-1,3-Dichloropropene | 100 | 98 | 51-134 | 3 | 30 | | | | |
| Ethyl t-butyl ether | 95 | 97 | 58-124 | 1 | 30 | | | | |
| Ethylbenzene | 109 | 106 | 44-141 | 4 | 30 | | | | |
| Freon 113 | 114 | 111 | 56-156 | 4 | 30 | | | | |
| Freon 133a | 111 | 132* | 61-131 | 17 | 30 | | | | |
| Hexachlorobutadiene | 90 | 84 | 10-155 | 8 | 30 | | | | |
| 2-Hexanone | 80 | 81 | 32-160 | 0 | 30 | | | | |
| di-Isopropyl ether | 98 | 99 | 59-133 | 0 | 30 | | | | |
| Isopropylbenzene | 106 | 103 | 38-144 | 4 | 30 | | | | |
| p-Isopropyltoluene | 102 | 98 | 29-152 | 5 | 30 | | | | |
| Methyl Iodide | 116 | 115 | 52-139 | 2 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 98 | 99 | 55-129 | 0 | 30 | | | | |
| 4-Methyl-2-pentanone | 80 | 84 | 46-139 | 4 | 30 | | | | |
| Methylene Chloride | 112 | 117 | 60-149 | 4 | 30 | | | | |
| n-Propylbenzene | 106 | 107 | 39-157 | 0 | 30 | | | | |
| Styrene | 104 | 107 | 35-134 | 2 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 106 | 104 | 55-139 | 3 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 90 | 95 | 29-182 | 4 | 30 | | | | |
| Tetrachloroethene | 109 | 107 | 42-149 | 4 | 30 | | | | |
| Toluene | 110 | 106 | 50-146 | 4 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 79 | 85 | 10-140 | 6 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 85 | 88 | 10-136 | 2 | 30 | | | | |
| 1,1,1-Trichloroethane | 106 | 106 | 52-146 | 1 | 30 | | | | |
| 1,1,2-Trichloroethane | 102 | 99 | 58-152 | 4 | 30 | | | | |
| Trichloroethene | 107 | 107 | 53-144 | 1 | 30 | | | | |
| Trichlorofluoromethane | 117 | 117 | 47-163 | 0 | 30 | | | | |
| 1,2,3-Trichloropropane | 98 | 102 | 36-180 | 3 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 106 | 104 | 37-149 | 3 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 105 | 106 | 38-150 | 0 | 30 | | | | |
| Vinyl Acetate | 55 | 64 | 21-139 | 16 | 30 | | | | |
| Vinyl Chloride | 114 | 117 | 50-154 | 1 | 30 | | | | |
| m+p-Xylene | 109 | 106 | 44-137 | 4 | 30 | | | | |
| o-Xylene | 105 | 102 | 42-137 | 4 | 30 | | | | |
| Batch number: 14162162401B | Sample number(s): 7489861-7489863 | | | | | BKG: 7489863 | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.5 | 4.4 | 1 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479940
Reported: 07/07/14 at 12:13 PM

## Surrogate Quality Control

Batch number: B141612AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7489861 | 108 | 105 | 99 | 94 |
| 7489862 | 110 | 105 | 96 | 93 |
| 7489863 | 107 | 101 | 97 | 92 |
| Blank | 104 | 104 | 100 | 96 |
| LCS | 108 | 113 | 103 | 103 |
| MS | 101 | 100 | 104 | 101 |
| MSD | 102 | 99 | 102 | 99 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141621AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7489860 | 101 | 99 | 97 | 95 |
| Blank | 100 | 98 | 96 | 95 |
| LCS | 100 | 96 | 97 | 97 |
| LCSD | 101 | 98 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/5/2014 A-13013

CarrierName: FedEx G-479940

AirbillNo: 770212567524 S-748986O-63

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20140605-03

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7470 (Soil) | Mercury 7471 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc. Nitrate - Nitrite - TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-060514 | 6/5/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-552-SA5A-SB-1.5-2.0 | 6/5/14 11:38 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-552-SA5A-SB-1.5-2.0 | 6/5/14 11:38 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-554-SA5A-SB-1.5-2.0 | 6/5/14 12:46 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-554-SA5A-SB-1.5-2.0 | 6/5/14 12:46 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-529-SA5A-SB-4.0-4.5 | 6/5/14 15:04 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-529-SA5A-SB-4.0-4.5 | 6/5/14 15:04 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Van Vathanasin

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 06/05/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [illegible] | 6.6.14 | 915 |

Soil Vapor 1 of 1

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# Sample Administration Receipt Documentation Log

Doc Log ID: 16617

Group Number(s): 1479940

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/06/2014 9:15 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:35 on 06/06/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.4 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

June 24, 2014

Project: SSFL Phase 3 Sampling

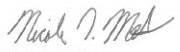
Submittal Date: 06/06/2014
Group Number: 1479956
SDG: PH220
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| EB-060514 Water | 7489903 |
| FDG2-SL-631-SA8-SB-0.0-0.5 Soil | 7489904 |
| FDG2-SL-631-SA8-SB-4.5-5.0 Soil | 7489905 |
| FDG2-SL-631-SA8-SB-7.0-8.0 Soil | 7489906 |
| TB1-060514 Water | 7489907 |
| FDG2-SL-624-SA8-SB-0.0-0.5 Soil | 7489908 |
| FDG2-SL-625-SA8-SB-0.0-0.5 Soil | 7489909 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: EB-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489903**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:00 by PH

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB65- SDG#: PH220-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/l | | ug/l | ug/l | |
| 12971 | Acenaphthene | 83-32-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Acenaphthylene | 208-96-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Anthracene | 120-12-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)anthracene | 56-55-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(a)pyrene | 50-32-8 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(b)fluoranthene | 205-99-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(e)pyrene | 192-97-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(g,h,i)perylene | 191-24-2 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Benzo(k)fluoranthene | 207-08-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Butylbenzylphthalate | 85-68-7 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Di-n-butylphthalate | 84-74-2 | 0.098 | J | 1.1 | 0.053 | 1 |
| 12971 | Chrysene | 218-01-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Dibenz(a,h)anthracene | 53-70-3 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Diethylphthalate | 84-66-2 | 0.090 | J | 1.1 | 0.053 | 1 |
| 12971 | Dimethylphthalate | 131-11-3 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 1.0 | J | 1.1 | 0.053 | 1 |
| 12971 | Fluoranthene | 206-44-0 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Fluorene | 86-73-7 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | 1-Methylnaphthalene | 90-12-0 | 0.024 | J | 0.053 | 0.011 | 1 |
| 12971 | 2-Methylnaphthalene | 91-57-6 | 0.034 | J | 0.053 | 0.011 | 1 |
| 12971 | Naphthalene | 91-20-3 | 0.072 | | 0.053 | 0.032 | 1 |
| 12971 | N-Nitrosodimethylamine | 62-75-9 | 0.053 | U | 0.053 | 0.011 | 1 |
| 12971 | Di-n-octylphthalate | 117-84-0 | 1.1 | U | 1.1 | 0.053 | 1 |
| 12971 | Phenanthrene | 85-01-8 | 0.053 | U | 0.053 | 0.032 | 1 |
| 12971 | Pyrene | 129-00-0 | 0.053 | U | 0.053 | 0.011 | 1 |

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The recovery for a target analyte (s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial. Similar results were obtained in both trials.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | ug/l | | ug/l | ug/l | |
| 13092 | Aroclor 5432 | 63496-31-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | Aroclor 5442 | 12642-23-8 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | Aroclor 5460 | 11126-42-4 | 0.42 | U | 0.42 | 0.093 | 1 |
| 13092 | PCB-1016 | 12674-11-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1221 | 11104-28-2 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1232 | 11141-16-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1242 | 53469-21-9 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1248 | 12672-29-6 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1254 | 11097-69-1 | 0.42 | U | 0.42 | 0.084 | 1 |
| 13092 | PCB-1260 | 11096-82-5 | 0.42 | U | 0.42 | 0.13 | 1 |
| 13092 | PCB-1262 | 37324-23-5 | 0.42 | U | 0.42 | 0.17 | 1 |
| 13092 | PCB-1268 | 11100-14-4 | 0.42 | U | 0.42 | 0.14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489903**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:00 by PH

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB65- SDG#: PH220-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/l** | **mg/l** | **mg/l** | |
| 10365 | EFH (C12-C14) | n.a. | 0.10 U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C15-C20) | n.a. | 0.10 U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C21-C30) | n.a. | 0.10 U | 0.10 | 0.050 | 1 |
| 10365 | EFH (C30 - C40) | n.a. | 0.50 U | 0.50 | 0.10 | 1 |
| 10365 | EFH (C8-C11) | n.a. | 0.10 U | 0.10 | 0.050 | 1 |
| 13205 | EFH C12-C14 w/ SiGel | n.a. | 0.10 U | 0.10 | 0.050 | 1 |
| 13205 | EFH C15-C20 w/ SiGel | n.a. | 0.10 U | 0.10 | 0.050 | 1 |
| 13205 | EFH C21-C30 w/ SiGel | n.a. | 0.10 U | 0.10 | 0.050 | 1 |
| 13205 | EFH C30-C40 w/ SiGel | n.a. | 0.50 U | 0.50 | 0.10 | 1 |
| 13205 | EFH C8-C11 w/ SiGel | n.a. | 0.10 U | 0.10 | 0.050 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial.
The reverse surrogate, capric acid, is present at <1%.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/l** | **mg/l** | **mg/l** | |
| 01743 | Aluminum | 7429-90-5 | 0.400 U | 0.400 | 0.0828 | 1 |
| 07044 | Antimony | 7440-36-0 | 0.0400 U | 0.0400 | 0.0053 | 1 |
| 07035 | Arsenic | 7440-38-2 | 0.0400 U | 0.0400 | 0.0068 | 1 |
| 07046 | Barium | 7440-39-3 | 0.0100 U | 0.0100 | 0.00033 | 1 |
| 07047 | Beryllium | 7440-41-7 | 0.0100 U | 0.0100 | 0.00067 | 1 |
| 08014 | Boron | 7440-42-8 | 0.100 U | 0.100 | 0.0084 | 1 |
| 07049 | Cadmium | 7440-43-9 | 0.0100 U | 0.0100 | 0.00076 | 1 |
| 01750 | Calcium | 7440-70-2 | 0.400 U | 0.400 | 0.0334 | 1 |
| 07051 | Chromium | 7440-47-3 | 0.0300 U | 0.0300 | 0.0016 | 1 |
| 07052 | Cobalt | 7440-48-4 | 0.0100 U | 0.0100 | 0.0013 | 1 |
| 07053 | Copper | 7440-50-8 | 0.0200 U | 0.0200 | 0.0027 | 1 |
| 01754 | Iron | 7439-89-6 | 0.400 U | 0.400 | 0.0430 | 1 |
| 07055 | Lead | 7439-92-1 | 0.0300 U | 0.0300 | 0.0047 | 1 |
| 01756 | Lithium | 7439-93-2 | 0.0400 U | 0.0400 | 0.0047 | 1 |
| 01757 | Magnesium | 7439-95-4 | 0.200 U | 0.200 | 0.0167 | 1 |
| 07058 | Manganese | 7439-96-5 | 0.0013 J | 0.0100 | 0.00083 | 1 |
| 07060 | Molybdenum | 7439-98-7 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07061 | Nickel | 7440-02-0 | 0.0200 U | 0.0200 | 0.0015 | 1 |
| 10143 | Phosphorus | 7723-14-0 | 0.200 U | 0.200 | 0.0418 | 1 |
| 01762 | Potassium | 7440-09-7 | 1.00 U | 1.00 | 0.0980 | 1 |
| 01767 | Sodium | 7440-23-5 | 2.00 U | 2.00 | 0.167 | 1 |
| 07069 | Tin | 7440-31-5 | 0.0400 U | 0.0400 | 0.0029 | 1 |
| 07070 | Titanium | 7440-32-6 | 0.0200 U | 0.0200 | 0.0017 | 1 |
| 07071 | Vanadium | 7440-62-2 | 0.0100 U | 0.0100 | 0.0020 | 1 |
| 07072 | Zinc | 7440-66-6 | 0.0400 U | 0.0400 | 0.0020 | 1 |
| 10144 | Zirconium | 7440-67-7 | 0.0109 J | 0.100 | 0.0084 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489903**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:00 by PH

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB65- SDG#: PH220-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6020A** | | **mg/l** | **mg/l** | **mg/l** | |
| 06041 | Selenium | 7782-49-2 | 0.0040 U | 0.0040 | 0.00050 | 1 |
| 06042 | Silver | 7440-22-4 | 0.0010 U | 0.0010 | 0.00011 | 1 |
| 06044 | Strontium | 7440-24-6 | 0.0020 U | 0.0020 | 0.00034 | 1 |
| 06045 | Thallium | 7440-28-0 | 0.0010 U | 0.0010 | 0.00015 | 1 |
| | **SW-846 7470A** | | **mg/l** | **mg/l** | **mg/l** | |
| 00259 | 3b Mercury 7470A | 7439-97-6 | 0.00020 U | 0.00020 | 0.000060 | 1 |
| **Wet Chemistry** | **SW-846 9040C** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 12152 | 28b pH (9040B and 9040C) | n.a. | 6.3 | 0.010 | 0.010 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489903**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:00 by PH

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB65- SDG#: PH220-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | 2378-TCDD | 1746-01-6 | 1.94 | U | 1.94 | 0.245 | 1 |
| 10915 | 12378-PeCDD | 40321-76-4 | 0.218 | JBQ | 9.72 | 0.205 | 1 |
| 10915 | 123478-HxCDD | 39227-28-6 | 9.72 | U | 9.72 | 0.138 | 1 |
| 10915 | 123678-HxCDD | 57653-85-7 | 9.72 | U | 9.72 | 0.140 | 1 |
| 10915 | 123789-HxCDD | 19408-74-3 | 0.141 | JBQ | 9.72 | 0.141 | 1 |
| 10915 | 1234678-HpCDD | 35822-46-9 | 0.193 | JBQ | 9.72 | 0.169 | 1 |
| 10915 | OCDD | 3268-87-9 | 1.75 | JB | 19.4 | 0.221 | 1 |
| 10915 | 2378-TCDF | 51207-31-9 | 1.94 | U | 1.94 | 0.146 | 1 |
| 10915 | 12378-PeCDF | 57117-41-6 | 0.544 | JBQ | 9.72 | 0.107 | 1 |
| 10915 | 23478-PeCDF | 57117-31-4 | 9.72 | U | 9.72 | 0.101 | 1 |
| 10915 | 123478-HxCDF | 70648-26-9 | 0.395 | JBQ | 9.72 | 0.105 | 1 |
| 10915 | 123678-HxCDF | 57117-44-9 | 0.313 | JB | 9.72 | 0.103 | 1 |
| 10915 | 123789-HxCDF | 72918-21-9 | 0.154 | JBQ | 9.72 | 0.120 | 1 |
| 10915 | 234678-HxCDF | 60851-34-5 | 0.225 | JBQ | 9.72 | 0.0970 | 1 |
| 10915 | 1234678-HpCDF | 67562-39-4 | 0.444 | JBQ | 9.72 | 0.0762 | 1 |
| 10915 | 1234789-HpCDF | 55673-89-7 | 0.245 | JBQ | 9.72 | 0.110 | 1 |
| 10915 | OCDF | 39001-02-0 | 0.765 | JBQ | 19.4 | 0.236 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **pg/l** | | **pg/l** | **pg/l** | |
| 10915 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.0318 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 86 | 25 - 181 |
| 13C12-123478-HxCDD | 88 | 32 - 141 |
| 13C12-123678-HxCDD | 93 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 78 | 23 - 140 |
| 13C12-OCDD | 62 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 91 | 24 - 185 |
| 13C12-23478-PeCDF | 89 | 21 - 178 |
| 13C12-123478-HxCDF | 91 | 26 - 152 |
| 13C12-123678-HxCDF | 95 | 26 - 123 |
| 13C12-234678-HxCDF | 91 | 28 - 136 |
| 13C12-123789-HxCDF | 85 | 29 - 147 |
| 13C12-1234678-HpCDF | 86 | 28 - 143 |
| 13C12-1234789-HpCDF | 69 | 26 - 138 |
| 13C12-OCDF | 58 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489903**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:00 by PH

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB65- SDG#: PH220-01EB

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received MRL* | As Received EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: EB-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489903**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:00 by PH

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB65- SDG#: PH220-01EB

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12971 | 7b SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14161WAH026 | 06/12/2014 06:44 | Brian K Graham | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 14161WAH026 | 06/11/2014 09:30 | David S Schrum | 1 |
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14163A94A | 06/13/2014 12:47 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14163A94A | 06/13/2014 12:47 | Marie D Beamenderfer | 1 |
| 13092 | 21b PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610003A | 06/11/2014 06:10 | Monica M Souders | 1 |
| 13093 | PCB/PCT Waters Update IV | SW-846 3510C | 1 | 141610003A | 06/10/2014 16:00 | Seth A Farrier | 1 |
| 10365 | 10b TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600042A | 06/11/2014 15:34 | Heather E Williams | 1 |
| 13205 | 10b TPH-DRO (w/Si Gel) | SW-846 8015B modified | 1 | 141600043A | 06/13/2014 05:03 | Heather E Williams | 1 |
| 13212 | EFH Water Ext. w/SiGel | SW-846 3510C | 1 | 141600043A | 06/10/2014 09:30 | David S Schrum | 1 |
| 11203 | EFH Waters Extraction | SW-846 3510C | 1 | 141600042A | 06/10/2014 09:30 | David S Schrum | 1 |
| 10915 | 17b Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14162001 | 06/13/2014 05:46 | Joseph D Anderson | 1 |
| 10914 | Dioxins/Furans in Water - SepF | EPA 1613B October 1994 | 1 | 14162001 | 06/11/2014 10:30 | Ginelle L McQuaid | 1 |
| 01743 | Aluminum | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07044 | Antimony | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07035 | Arsenic | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07046 | Barium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07047 | Beryllium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 08014 | Boron | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07049 | Cadmium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 01750 | Calcium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07051 | Chromium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07052 | Cobalt | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07053 | Copper | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 01754 | Iron | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07055 | Lead | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 01756 | Lithium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 01757 | Magnesium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07058 | Manganese | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07060 | Molybdenum | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07061 | Nickel | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 10143 | Phosphorus | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 01762 | Potassium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 01767 | Sodium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07069 | Tin | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07070 | Titanium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: EB-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489903**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 15:00 by PH

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

EB65- SDG#: PH220-01EB

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07071 | Vanadium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 07072 | Zinc | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 10144 | Zirconium | SW-846 6010C | 1 | 141640635001 | 06/16/2014 22:49 | John P Hook | 1 |
| 06041 | Selenium | SW-846 6020A | 1 | 141640639001B | 06/17/2014 04:31 | Choon Y Tian | 1 |
| 06042 | Silver | SW-846 6020A | 1 | 141640639001A | 06/17/2014 04:31 | Choon Y Tian | 1 |
| 06044 | Strontium | SW-846 6020A | 1 | 141640639001A | 06/17/2014 04:31 | Choon Y Tian | 1 |
| 06045 | Thallium | SW-846 6020A | 1 | 141640639001A | 06/17/2014 04:31 | Choon Y Tian | 1 |
| 00259 | 3b Mercury 7470A | SW-846 7470A | 1 | 141645713003 | 06/17/2014 07:40 | Damary Valentin | 1 |
| 10635 | WW SW846(IV) ICP Dig (tot rec) | SW-846 3005A | 1 | 141640635001 | 06/16/2014 09:40 | Micaela L Dishong | 1 |
| 10639 | ICP/MS SW846 (IV) Water Digest | SW-846 3010A modified | 1 | 141640639001 | 06/16/2014 09:05 | Micaela L Dishong | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 141645713003 | 06/16/2014 11:46 | Micaela L Dishong | 1 |
| 12152 | 28b pH (9040B and 9040C) | SW-846 9040C | 1 | 14157003106A | 06/07/2014 05:56 | Michele L Graham | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-631-SA8-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489904**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 08:15 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63100 SDG#: PH220-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.5 | J | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 25 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 46 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.3 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 4.6 | J | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.0 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA
CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 22:35 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 10:49 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-631-SA8-SB-4.5-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489905**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 08:50 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63145 SDG#: PH220-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1 | U | 1 | 0.2 | 22.77 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 7.5 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 36 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 80 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.0 | J | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 7.4 | J | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 8.6 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA
CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/13/2014 20:56 | Marie D Beamenderfer | 22.77 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415734734 | 06/06/2014 15:09 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415734734 | 06/06/2014 15:10 | Lisa J Cooke | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 23:39 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 11:54 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-631-SA8-SB-4.5-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489905**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 08:50 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63145 SDG#: PH220-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-631-SA8-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489906**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 09:40 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63170 SDG#: PH220-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 2.0 | U | 2.0 | 0.40 | 1 |
| 12969 | Anthracene | 120-12-7 | 2.0 | U | 2.0 | 0.40 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 20 | U | 20 | 4.0 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 22 | U | 22 | 7.2 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 22 | U | 22 | 7.2 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.55 | J | 2.0 | 0.40 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 22 | U | 22 | 7.2 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 22 | U | 22 | 7.2 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 45 | | 22 | 7.2 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Fluorene | 86-73-7 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 22 | U | 22 | 7.2 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.0 | U | 2.0 | 0.80 | 1 |
| 12969 | Pyrene | 129-00-0 | 2.0 | U | 2.0 | 0.80 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
N-Nitrosodimethylamine

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 22.24 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 40 | U | 40 | 12 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 40 | U | 40 | 12 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 40 | U | 40 | 12 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 20 | U | 20 | 4.0 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 20 | U | 20 | 6.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 20 | U | 20 | 4.9 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 20 | U | 20 | 4.9 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 20 | U | 20 | 4.0 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 20 | U | 20 | 5.3 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 20 | U | 20 | 4.7 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 20 | U | 20 | 4.0 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 20 | U | 20 | 4.0 | 1 |

For all QC parameters which are outside project defined limits,

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-631-SA8-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489906**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 09:40 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63170 SDG#: PH220-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | but within the laboratory statistical limits, no corrective action is taken. | | | | | | |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.9 | J | 6.0 | 2.4 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 8.9 | | 6.0 | 2.4 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 14 | | 12 | 4.8 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 12 | U | 12 | 4.8 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 6.0 | U | 6.0 | 2.4 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 26,600 | | 48.0 | 8.65 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.80 | U | 4.80 | 0.887 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.09 | J | 4.80 | 0.839 | 1 |
| 06946 | Barium | 7440-39-3 | 148 | | 1.20 | 0.0396 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.911 | J | 1.20 | 0.0803 | 1 |
| 07914 | Boron | 7440-42-8 | 11.1 | J | 12.0 | 1.01 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.380 | J | 1.20 | 0.0911 | 1 |
| 01650 | Calcium | 7440-70-2 | 34,900 | | 24.0 | 4.00 | 1 |
| 06951 | Chromium | 7440-47-3 | 30.6 | | 3.60 | 0.192 | 1 |
| 06952 | Cobalt | 7440-48-4 | 7.63 | | 1.20 | 0.119 | 1 |
| 06953 | Copper | 7440-50-8 | 12.3 | | 2.40 | 0.348 | 1 |
| 01654 | Iron | 7439-89-6 | 29,600 | | 48.0 | 4.34 | 1 |
| 06955 | Lead | 7439-92-1 | 12.1 | | 3.60 | 0.600 | 1 |
| 01656 | Lithium | 7439-93-2 | 26.3 | | 4.8 | 0.41 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,770 | | 12.0 | 2.00 | 1 |
| 06958 | Manganese | 7439-96-5 | 312 | | 1.20 | 0.0995 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 2.40 | U | 2.40 | 0.204 | 1 |
| 06961 | Nickel | 7440-02-0 | 15.6 | | 2.40 | 0.156 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 171 | | 12.0 | 3.47 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,000 | | 120 | 10.0 | 1 |
| 01667 | Sodium | 7440-23-5 | 710 | | 120 | 20.0 | 1 |
| 06969 | Tin | 7440-31-5 | 3.74 | J | 12.0 | 0.264 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,110 | | 1.20 | 0.204 | 1 |
| 06971 | Vanadium | 7440-62-2 | 54.2 | | 1.20 | 0.156 | 1 |
| 06972 | Zinc | 7440-66-6 | 56.0 | | 4.80 | 0.240 | 1 |
| 10146 | Zirconium | 7440-67-7 | 5.77 | J | 6.00 | 1.01 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.288 | J | 0.480 | 0.120 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0633 | J | 0.240 | 0.0312 | 2 |
| 06144 | Strontium | 7440-24-6 | 71.6 | | 0.480 | 0.0815 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.315 | | 0.240 | 0.0360 | 2 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-631-SA8-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489906**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 09:40 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63170 SDG#: PH220-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0161 J | 0.0188 | 0.0113 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 21.9 C. | n.a. | 8.01 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 16.6 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA
CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/18/2014 09:00 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/13/2014 21:33 | Marie D Beamenderfer | 22.24 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415734734 | 06/06/2014 15:07 | Lisa J Cooke | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415734734 | 06/06/2014 15:08 | Lisa J Cooke | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141580012A | 06/10/2014 10:06 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141580012A | 06/09/2014 02:30 | Sherry L Morrow | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 20:03 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 07:56 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-631-SA8-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489906**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 09:40 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63170 SDG#: PH220-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06949 | Cadmium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 12:56 | Joanne M Gates | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141600637001 | 06/11/2014 09:19 | Eric L Eby | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141600637001B | 06/11/2014 06:12 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:12 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:12 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141600637001A | 06/11/2014 06:12 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141600638001 | 06/11/2014 09:20 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141600637001 | 06/10/2014 11:56 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141600638001 | 06/10/2014 13:25 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14157039401A | 06/06/2014 21:30 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB1-060514 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7489907**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 08:00

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB165 SDG#: PH220-05TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14163A94A | 06/13/2014 13:12 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14163A94A | 06/13/2014 13:12 | Marie D Beamenderfer | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-624-SA8-SB-0.0-0.5 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7489908**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 13:00 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62400 SDG#: PH220-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.1 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 21 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA
CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 20:25 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 08:18 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-625-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7489909**
**LL Group # 1479956**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/05/2014 13:55 by RR

Submitted: 06/06/2014 09:15
Reported: 06/24/2014 09:01

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

62500 SDG#: PH220-07*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 49 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 86 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 3.8 | J | 5.1 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.9 | J | 5.1 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 8.3 | J | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.8 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA
CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/13/2014 00:23 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 08:39 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14161WAH026 | Sample number(s): 7489903 | | | | | | | | | |
| Acenaphthene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 98 | 83-119 | 0 | 30 |
| Acenaphthylene | 0.050 | U | 0.050 | 0.010 | ug/l | 93 | 92 | 81-130 | 2 | 30 |
| Anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 97 | 83-125 | 1 | 30 |
| Benzo(a)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 102 | 79-122 | 0 | 30 |
| Benzo(a)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 98 | 80-121 | 1 | 30 |
| Benzo(b)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 103 | 104 | 79-136 | 1 | 30 |
| Benzo(e)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 98 | 67-118 | 0 | 30 |
| Benzo(g,h,i)perylene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 99 | 72-132 | 1 | 30 |
| Benzo(k)fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 105 | 101 | 81-131 | 3 | 30 |
| Butylbenzylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 85 | 85 | 40-138 | 1 | 30 |
| Di-n-butylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 102 | 105 | 64-141 | 2 | 30 |
| Chrysene | 0.050 | U | 0.050 | 0.010 | ug/l | 104 | 99 | 84-118 | 6 | 30 |
| Dibenz(a,h)anthracene | 0.050 | U | 0.050 | 0.010 | ug/l | 100 | 95 | 66-133 | 5 | 30 |
| Diethylphthalate | 0.069 | J | 1.0 | 0.050 | ug/l | 97 | 95 | 64-137 | 2 | 30 |
| Dimethylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 79 | 79 | 23-139 | 0 | 30 |
| Bis(2-Ethylhexyl)phthalate | 0.096 | J | 1.0 | 0.050 | ug/l | 93 | 639* | 70-143 | 149* | 30 |
| Fluoranthene | 0.050 | U | 0.050 | 0.010 | ug/l | 102 | 99 | 84-124 | 2 | 30 |
| Fluorene | 0.050 | U | 0.050 | 0.010 | ug/l | 96 | 96 | 82-119 | 0 | 30 |
| Indeno(1,2,3-cd)pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 99 | 96 | 68-132 | 3 | 30 |
| 1-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 87 | 86 | 86-130 | 1 | 30 |
| 2-Methylnaphthalene | 0.050 | U | 0.050 | 0.010 | ug/l | 84 | 82 | 81-131 | 2 | 30 |
| Naphthalene | 0.050 | U | 0.050 | 0.030 | ug/l | 86 | 85 | 82-122 | 2 | 30 |
| N-Nitrosodimethylamine | 0.050 | U | 0.050 | 0.010 | ug/l | 68 | 66 | 56-96 | 4 | 30 |
| Di-n-octylphthalate | 1.0 | U | 1.0 | 0.050 | ug/l | 85 | 78 | 57-145 | 9 | 30 |
| Phenanthrene | 0.050 | U | 0.050 | 0.030 | ug/l | 97 | 97 | 83-116 | 0 | 30 |
| Pyrene | 0.050 | U | 0.050 | 0.010 | ug/l | 98 | 96 | 78-125 | 2 | 30 |
| Batch number: 14163SLB026 | Sample number(s): 7489906 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 68* | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-119 | | |
| Batch number: 14163A94A | Sample number(s): 7489903,7489907 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 98 | 101 | 80-133 | 3 | 30 |
| Batch number: 14164A16A | Sample number(s): 7489905-7489906 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 141580012A | Sample number(s): 7489906 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 88 | 95 | 36-106 | 7 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 112 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 112 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141610003A | Sample number(s): 7489903 | | | | | | | | | |
| Aroclor 5432 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| Aroclor 5442 | 0.40 | U | 0.40 | 0.080 | ug/l | 80 | 61 | 34-115 | 28 | 30 |
| Aroclor 5460 | 0.40 | U | 0.40 | 0.088 | ug/l | | | | | |
| PCB-1016 | 0.40 | U | 0.40 | 0.080 | ug/l | 99 | 101 | 60-117 | 2 | 30 |
| PCB-1221 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1232 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1242 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1248 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1254 | 0.40 | U | 0.40 | 0.080 | ug/l | | | | | |
| PCB-1260 | 0.40 | U | 0.40 | 0.12 | ug/l | 102 | 103 | 67-128 | 0 | 30 |
| PCB-1262 | 0.40 | U | 0.40 | 0.16 | ug/l | | | | | |
| PCB-1268 | 0.40 | U | 0.40 | 0.13 | ug/l | | | | | |
| Batch number: 141600037A | Sample number(s): 7489904-7489906,7489908-7489909 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 84 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 85 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 58 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 71 | | 60-115 | | |
| Batch number: 141600038A | Sample number(s): 7489904-7489906,7489908-7489909 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 74* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 77* | | 78-127 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 78 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 65 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 56* | | 60-115 | | |
| Batch number: 141600042A | Sample number(s): 7489903 | | | | | | | | | |
| EFH (C12-C14) | 0.10 | U | 0.10 | 0.050 | mg/l | 59* | 50* | 67-109 | 16 | 30 |
| EFH (C15-C20) | 0.10 | U | 0.10 | 0.050 | mg/l | 92 | 88 | 71-119 | 4 | 30 |
| EFH (C21-C30) | 0.10 | U | 0.10 | 0.050 | mg/l | 91 | 88 | 75-117 | 3 | 30 |
| EFH (C30 - C40) | 0.50 | U | 0.50 | 0.10 | mg/l | 78 | 61 | 44-134 | 24 | 30 |
| EFH (C8-C11) | 0.10 | U | 0.10 | 0.050 | mg/l | 21* | 15* | 55-86 | 32* | 30 |
| Batch number: 141600043A | Sample number(s): 7489903 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 52* | 44* | 67-109 | 16 | 30 |
| EFH C15-C20 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 82 | 78 | 71-119 | 5 | 30 |
| EFH C21-C30 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 85 | 81 | 75-117 | 5 | 30 |
| EFH C30-C40 w/ SiGel | 0.50 | U | 0.50 | 0.10 | mg/l | 83 | 69 | 44-134 | 17 | 30 |
| EFH C8-C11 w/ SiGel | 0.10 | U | 0.10 | 0.050 | mg/l | 16* | 12* | 55-86 | 34* | 30 |
| Batch number: 141600637001 | Sample number(s): 7489906 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 104 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 104 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 99 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 99 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 98 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 100 | | 80-120 | | |
| Calcium | 9.52 | J | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 100 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 103 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 101 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 102 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 102 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 101 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 102 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 106 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 102 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 102 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.47 | J | 10.0 | 0.220 | mg/kg | 102 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 101 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 100 | | 80-120 | | |
| Zinc | 0.541 | J | 4.00 | 0.200 | mg/kg | 101 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Batch number: 141600637001A | Sample number(s): 7489906 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 106 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 106 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 111 | | 80-120 | | |
| Batch number: 141600637001B | Sample number(s): 7489906 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 103 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141600638001 | Sample number(s): 7489906 | | | | | | | | |
| 3a Mercury 7471A | 0.0167 U | 0.0167 | 0.0100 | mg/kg | 93 | | 85-120 | | |
| Batch number: 141640635001 | Sample number(s): 7489903 | | | | | | | | |
| Aluminum | 0.400 U | 0.400 | 0.0828 | mg/l | 109 | 106 | 90-112 | 3 | 20 |
| Antimony | 0.0400 U | 0.0400 | 0.0053 | mg/l | 100 | 98 | 88-111 | 1 | 20 |
| Arsenic | 0.0400 U | 0.0400 | 0.0068 | mg/l | 110 | 108 | 90-113 | 1 | 20 |
| Barium | 0.0100 U | 0.0100 | 0.00033 | mg/l | 108 | 107 | 90-110 | 1 | 20 |
| Beryllium | 0.0100 U | 0.0100 | 0.00067 | mg/l | 108 | 106 | 90-111 | 2 | 20 |
| Boron | 0.100 U | 0.100 | 0.0084 | mg/l | 100 | 99 | 90-110 | 2 | 20 |
| Cadmium | 0.0100 U | 0.0100 | 0.00076 | mg/l | 110 | 108 | 90-112 | 2 | 20 |
| Calcium | 0.400 U | 0.400 | 0.0334 | mg/l | 109 | 106 | 90-112 | 2 | 20 |
| Chromium | 0.0300 U | 0.0300 | 0.0016 | mg/l | 106 | 103 | 90-110 | 3 | 20 |
| Cobalt | 0.0100 U | 0.0100 | 0.0013 | mg/l | 111 | 109 | 90-114 | 2 | 20 |
| Copper | 0.0200 U | 0.0200 | 0.0027 | mg/l | 107 | 104 | 90-112 | 2 | 20 |
| Iron | 0.400 U | 0.400 | 0.0430 | mg/l | 109 | 107 | 90-112 | 2 | 20 |
| Lead | 0.0300 U | 0.0300 | 0.0047 | mg/l | 110 | 108 | 88-116 | 2 | 20 |
| Lithium | 0.0400 U | 0.0400 | 0.0047 | mg/l | 108 | 105 | 90-110 | 3 | 20 |
| Magnesium | 0.200 U | 0.200 | 0.0167 | mg/l | 108 | 106 | 89-110 | 2 | 20 |
| Manganese | 0.0014 J | 0.0100 | 0.00083 | mg/l | 105 | 107 | 90-110 | 2 | 20 |
| Molybdenum | 0.0200 U | 0.0200 | 0.0017 | mg/l | 108 | 106 | 90-110 | 2 | 20 |
| Nickel | 0.0016 J | 0.0200 | 0.0015 | mg/l | 113 | 111 | 90-117 | 2 | 20 |
| Phosphorus | 0.200 U | 0.200 | 0.0418 | mg/l | 107 | 104 | 90-110 | 3 | 20 |
| Potassium | 1.00 U | 1.00 | 0.0980 | mg/l | 105 | 102 | 90-110 | 3 | 20 |
| Sodium | 2.00 U | 2.00 | 0.167 | mg/l | 105 | 102 | 87-114 | 3 | 20 |
| Tin | 0.0400 U | 0.0400 | 0.0029 | mg/l | 106 | 103 | 90-110 | 2 | 20 |
| Titanium | 0.0200 U | 0.0200 | 0.0017 | mg/l | 108 | 106 | 90-113 | 2 | 20 |
| Vanadium | 0.0100 U | 0.0100 | 0.0020 | mg/l | 110 | 108 | 90-110 | 2 | 20 |
| Zinc | 0.0047 J | 0.0400 | 0.0020 | mg/l | 107 | 106 | 90-110 | 2 | 20 |
| Zirconium | 0.0094 J | 0.100 | 0.0084 | mg/l | 107 | 104 | 90-110 | 3 | 20 |
| Batch number: 141640639001A | Sample number(s): 7489903 | | | | | | | | |
| Silver | 0.0010 U | 0.0010 | 0.00011 | mg/l | 103 | 103 | 90-115 | 1 | 20 |
| Strontium | 0.0020 U | 0.0020 | 0.00034 | mg/l | 103 | 102 | 90-110 | 1 | 20 |
| Thallium | 0.0010 U | 0.0010 | 0.00015 | mg/l | 105 | 101 | 90-115 | 3 | 20 |
| Batch number: 141640639001B | Sample number(s): 7489903 | | | | | | | | |
| Selenium | 0.0040 U | 0.0040 | 0.00050 | mg/l | 101 | 101 | 90-114 | 0 | 20 |
| Batch number: 141645713003 | Sample number(s): 7489903 | | | | | | | | |
| 3b Mercury 7470A | 0.00020 U | 0.00020 | 0.00006 0 | mg/l | 98 | 94 | 90-115 | 4 | 20 |
| Batch number: 14157003106A | Sample number(s): 7489903 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | 100 | | 90-110 | | |
| Batch number: 14157039401A | Sample number(s): 7489906 | | | | | | | | |
| 15a pH by 9045D | | | | | 100 | | 95-105 | | |
| Batch number: 14164162401A | Sample number(s): 7489904-7489906,7489908-7489909 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14162001 | Sample number(s): 7489903 | | | | | | | | | |
| 2378-TCDD | 2.00 | U | 2.00 | 0.252 | pg/l | 101 | | 60-150 | | |
| 12378-PeCDD | 0.241 | J | 10.0 | 0.194 | pg/l | 97 | | 60-150 | | |
| 123478-HxCDD | 0.280 | J | 10.0 | 0.164 | pg/l | 96 | | 60-150 | | |
| 123678-HxCDD | 10.0 | U | 10.0 | 0.171 | pg/l | 94 | | 60-150 | | |
| 123789-HxCDD | 0.251 | J | 10.0 | 0.161 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDD | 0.811 | J | 10.0 | 0.181 | pg/l | 97 | | 60-150 | | |
| OCDD | 1.29 | J | 20.0 | 0.220 | pg/l | 94 | | 60-150 | | |
| 2378-TCDF | 2.00 | U | 2.00 | 0.174 | pg/l | 93 | | 60-150 | | |
| 12378-PeCDF | 0.172 | J | 10.0 | 0.107 | pg/l | 96 | | 60-150 | | |
| 23478-PeCDF | 0.109 | J | 10.0 | 0.0990 | pg/l | 98 | | 60-150 | | |
| 123478-HxCDF | 0.176 | J | 10.0 | 0.105 | pg/l | 100 | | 60-150 | | |
| 123678-HxCDF | 0.258 | J | 10.0 | 0.0950 | pg/l | 99 | | 60-150 | | |
| 123789-HxCDF | 0.465 | J | 10.0 | 0.109 | pg/l | 97 | | 60-150 | | |
| 234678-HxCDF | 0.399 | J | 10.0 | 0.0930 | pg/l | 98 | | 60-150 | | |
| 1234678-HpCDF | 0.621 | J | 10.0 | 0.0768 | pg/l | 99 | | 60-150 | | |
| 1234789-HpCDF | 0.299 | J | 10.0 | 0.111 | pg/l | 97 | | 60-150 | | |
| OCDF | 1.27 | J | 20.0 | 0.252 | pg/l | 96 | | 60-150 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.250 | | | | pg/l | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14163SLB026 | Sample number(s): 7489906 UNSPK: P492863 | | | | | | | | |
| Acenaphthene | 88 | 80 | 48-127 | 10 | 30 | | | | |
| Acenaphthylene | 82 | 75 | 60-128 | 10 | 30 | | | | |
| Anthracene | 83 | 75 | 52-126 | 11 | 30 | | | | |
| Benzo(a)anthracene | 86 | 79 | 44-143 | 8 | 30 | | | | |
| Benzo(a)pyrene | 82 | 74 | 49-137 | 10 | 30 | | | | |
| Benzo(b)fluoranthene | 105 | 95 | 26-142 | 10 | 30 | | | | |
| Benzo(e)pyrene | 84 | 77 | 63-111 | 9 | 30 | | | | |
| Benzo(g,h,i)perylene | 42 | 38 | 33-141 | 11 | 30 | | | | |
| Benzo(k)fluoranthene | 102 | 97 | 49-144 | 4 | 30 | | | | |
| Butylbenzylphthalate | 101 | 81 | 64-156 | 18 | 30 | | | | |
| Di-n-butylphthalate | 87 | 81 | 52-147 | 7 | 30 | | | | |
| Chrysene | 88 | 80 | 43-141 | 9 | 30 | | | | |
| Dibenz(a,h)anthracene | 51 | 46 | 25-145 | 9 | 30 | | | | |
| Diethylphthalate | 87 | 79 | 66-140 | 9 | 30 | | | | |
| Dimethylphthalate | 86 | 78 | 70-123 | 10 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 51 | 64 | 48-164 | 11 | 30 | | | | |
| Fluoranthene | 89 | 82 | 38-153 | 8 | 30 | | | | |
| Fluorene | 89 | 82 | 57-130 | 9 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 49 | 44 | 26-139 | 10 | 30 | | | | |
| 1-Methylnaphthalene | 85 | 77 | 59-139 | 9 | 30 | | | | |
| 2-Methylnaphthalene | 87 | 79 | 46-147 | 10 | 30 | | | | |

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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 86 | 78 | 52-136 | 9 | 30 | | | | |
| N-Nitrosodimethylamine | 61 | 55 | 39-134 | 10 | 30 | | | | |
| Di-n-octylphthalate | 115 | 109 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 85 | 77 | 50-137 | 10 | 30 | | | | |
| Pyrene | 75 | 69 | 26-143 | 8 | 30 | | | | |
| Batch number: 14164A16A | Sample number(s): 7489905-7489906 UNSPK: P494363 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 80 | 80 | 69-123 | 6 | 30 | | | | |
| Batch number: 141580012A | Sample number(s): 7489906 UNSPK: P488115 | | | | | | | | |
| PCB-1016 | 116 | 114 | 41-135 | 1 | 50 | | | | |
| PCB-1260 | 120 | 120 | 40-134 | 0 | 50 | | | | |
| Batch number: 141600037A | Sample number(s): 7489904-7489906,7489908-7489909 UNSPK: 7489904 | | | | | | | | |
| EFH (C12-C14) | 94 | 90 | 49-123 | 4 | 20 | | | | |
| EFH (C15-C20) | 91 | 92 | 49-123 | 1 | 20 | | | | |
| EFH (C21-C30) | 100 | 101 | 49-123 | 0 | 20 | | | | |
| EFH (C30-C40) | 134* | 156* | 49-123 | 5 | 20 | | | | |
| EFH (C8-C11) | 94 | 101 | 49-123 | 7 | 20 | | | | |
| Batch number: 141600038A | Sample number(s): 7489904-7489906,7489908-7489909 UNSPK: 7489904 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 71 | 76 | 49-123 | 6 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 75 | 79 | 49-123 | 5 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 77 | 83 | 49-123 | 6 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 77 | 87 | 49-123 | 10 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 54 | 58 | 49-123 | 8 | 20 | | | | |
| Batch number: 141600637001 | Sample number(s): 7489906 UNSPK: P488115 BKG: P488115 | | | | | | | | |
| Aluminum | 2266 (2) | 2288 (2) | 75-125 | 1 | 20 | 17,900 | 18,700 | 5 | 20 |
| Antimony | 34* | 35* | 75-125 | 5 | 20 | 3.85 U | 3.92 U | 0 (1) | 20 |
| Arsenic | 103 | 100 | 75-125 | 0 | 20 | 2.25 J | 2.75 J | 20 (1) | 20 |
| Barium | 103 | 105 | 75-125 | 3 | 20 | 102 | 107 | 5 | 20 |
| Beryllium | 103 | 103 | 75-125 | 3 | 20 | 0.698 J | 0.751 J | 7 (1) | 20 |
| Boron | 99 | 99 | 75-125 | 3 | 20 | 7.62 J | 7.18 J | 6 (1) | 20 |
| Cadmium | 94 | 93 | 75-125 | 2 | 20 | 0.283 J | 0.244 J | 15 (1) | 20 |
| Calcium | 111 (2) | 103 (2) | 75-125 | 0 | 20 | 3,180 | 3,190 | 0 | 20 |
| Chromium | 109 | 106 | 75-125 | 0 | 20 | 20.5 | 21.5 | 5 | 20 |
| Cobalt | 93 | 92 | 75-125 | 2 | 20 | 5.97 | 6.34 | 6 | 20 |
| Copper | 106 | 106 | 75-125 | 2 | 20 | 9.57 | 9.78 | 2 (1) | 20 |
| Iron | 1070 (2) | 177 (2) | 75-125 | 4 | 20 | 21,800 | 23,200 | 6 | 20 |
| Lead | 90 | 88 | 75-125 | 0 | 20 | 9.34 | 10.0 | 7 (1) | 20 |
| Lithium | 102 | 102 | 75-125 | 3 | 20 | 19.4 | 20.1 | 4 | 20 |
| Magnesium | 184 (2) | 131 (2) | 75-125 | 2 | 20 | 4,130 | 4,210 | 2 | 20 |
| Manganese | 104 (2) | 96 (2) | 75-125 | 1 | 20 | 317 | 346 | 9 | 20 |
| Molybdenum | 93 | 92 | 75-125 | 3 | 20 | 0.438 J | 0.276 J | 45* (1) | 20 |
| Nickel | 96 | 95 | 75-125 | 1 | 20 | 11.7 | 11.9 | 2 | 20 |
| Phosphorus | 89 | 76 | 75-125 | 3 | 20 | 229 | 230 | 0 | 20 |
| Potassium | 125 | 121 | 75-125 | 0 | 20 | 2,790 | 2,770 | 1 | 20 |
| Sodium | 99 | 100 | 75-125 | 3 | 20 | 78.9 J | 79.0 J | 0 (1) | 20 |
| Tin | 87 | 86 | 75-125 | 2 | 20 | 3.21 J | 3.28 J | 2 (1) | 20 |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Titanium | 337 (2) | 359 (2) | 75-125 | 2 | 20 | 991 | 1,020 | 3 | 20 |
| Vanadium | 110 | 110 | 75-125 | 2 | 20 | 38.8 | 41.4 | 6 | 20 |
| Zinc | 94 | 91 | 75-125 | 0 | 20 | 49.1 | 48.3 | 2 | 20 |
| Zirconium | 97 | 97 | 75-125 | 3 | 20 | 3.68 J | 4.36 J | 17 (1) | 20 |
| Batch number: 141600637001A | Sample number(s): 7489906 UNSPK: P488115 BKG: P488115 | | | | | | | | |
| Silver | 107 | 105 | 75-125 | 1 | 20 | 0.0373 J | 0.0429 J | 14 (1) | 20 |
| Strontium | 92 | 86 | 75-125 | 1 | 20 | 21.7 | 24.5 | 12 | 20 |
| Thallium | 110 | 104 | 75-125 | 1 | 20 | 0.288 | 0.341 | 17 (1) | 20 |
| Batch number: 141600637001B | Sample number(s): 7489906 UNSPK: P488115 BKG: P488115 | | | | | | | | |
| Selenium | 101 | 96 | 75-125 | 2 | 20 | 0.288 J | 0.324 J | 12 (1) | 20 |
| Batch number: 141600638001 | Sample number(s): 7489906 UNSPK: P488115 BKG: P488115 | | | | | | | | |
| 3a Mercury 7471A | 102 | 103 | 65-135 | 3 | 20 | 0.0155 U | 0.0164 U | 0 (1) | 20 |
| Batch number: 14157003106A | Sample number(s): 7489903 BKG: P489671 | | | | | | | | |
| 28b pH (9040B and 9040C) | | | | | | 7.9 | 7.9 | 0 | 3 |
| Batch number: 14157039401A | Sample number(s): 7489906 BKG: 7489906 | | | | | | | | |
| 15a pH by 9045D | | | | | | 8.01 | 7.99 | 0 | 3 |
| Batch number: 14164162401A | Sample number(s): 7489904-7489906,7489908-7489909 BKG: P492844 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.6 | 3.6 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7b SVOC SIM EPA 8270D
Batch number: 14161WAH026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7489903 | 100 | 106 | 89 |
| Blank | 105 | 110 | 90 |
| LCS | 103 | 111 | 87 |
| LCSD | 102 | 110 | 87 |
| Limits: | 59-128 | 62-141 | 70-134 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14163SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7489906 | 90 | 93 | 81 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

## Surrogate Quality Control

| | | | |
|---|---|---|---|
| Blank | 94 | 101 | 87 |
| LCS | 100 | 106 | 92 |
| MS | 90 | 97 | 85 |
| MSD | 82 | 91 | 77 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14163A94A

| | Trifluorotoluene-F |
|---|---|
| 7489903 | 93 |
| 7489907 | 83 |
| Blank | 85 |
| LCS | 92 |
| LCSD | 94 |
| Limits: | 63-135 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14164A16A

| | Trifluorotoluene-F |
|---|---|
| 7489905 | 91 |
| 7489906 | 82 |
| Blank | 101 |
| LCS | 94 |
| MS | 81 |
| MSD | 75 |
| Limits: | 50-142 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141580012A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7489906 | 119 | 111 |
| Blank | 123* | 116 |
| LCS | 118 | 112 |
| LCSD | 124* | 116 |
| MS | 121* | 115 |
| MSD | 120 | 115 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 21b PCBs and PCTs 8082A
Batch number: 141610003A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7489903 | 99 | 86 |
| Blank | 91 | 86 |
| LCS | 99 | 90 |
| LCSD | 100 | 87 |
| Limits: | 45-120 | 45-120 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

## Surrogate Quality Control

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141600037A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7489904 | 95 | 93 |
| 7489905 | 87 | 92 |
| 7489906 | 89 | 87 |
| 7489908 | 75 | 93 |
| 7489909 | 72 | 79 |
| Blank | 70 | 84 |
| LCS | 82 | 84 |
| MS | 84 | 90 |
| MSD | 82 | 86 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141600038A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7489904 | 64 | 71 |
| 7489905 | 71 | 77 |
| 7489906 | 68 | 74 |
| 7489908 | 67 | 74 |
| 7489909 | 57 | 66 |
| Blank | 65 | 83 |
| LCS | 67 | 76 |
| MS | 66 | 74 |
| MSD | 74 | 86 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 10b TPH by EPA 8015B (DRO)
Batch number: 141600042A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7489903 | 78 | 78 |
| Blank | 75 | 78 |
| LCS | 81 | 84 |
| LCSD | 76 | 80 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 10b TPH-DRO (w/Si Gel)
Batch number: 141600043A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7489903 | 66 | 74 |
| Blank | 67 | 81 |
| LCS | 68 | 77 |
| LCSD | 62 | 73 |
| Limits: | 45-126 | 69-119 |

Analysis Name: 17b Dioxin/Furan by EPA 1613B
Batch number: 14162001

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1479956
Reported: 06/24/14 at 09:01 AM

## Surrogate Quality Control

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7489903 | 83 | 86 | 88 | 93 | 88 | 78 |
| Blank | 83 | 93 | 95 | 97 | 95 | 84 |
| OPR | 76 | 91 | 89 | 90 | 88 | 80 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7489903 | 62 | 83 | 91 | 89 | 91 | 95 |
| Blank | 70 | 85 | 97 | 95 | 96 | 101 |
| OPR | 67 | 76 | 90 | 91 | 86 | 89 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7489903 | 91 | 85 | 86 | 69 | 58 |
| Blank | 98 | 99 | 95 | 75 | 63 |
| OPR | 87 | 86 | 85 | 72 | 60 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 6/5/2014 | A-13013 | Contact Name: | Pam Hartman | COC No: 20140605-01 |
| CarrierName: | FedEx | G-1479956 | Contact Phone: | (818)466-8007 | Cooler #: 1 |
| AirbillNo: | 770212567524 | S-7489903-09 | | | Lab: Lancaster |
| | | | | | Lab Phone: 717-556-7259 |
| | | | | | Lab Address: 2425 New Holland Pike, Lancaster, PA 17601 |

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EB-060514 | 6/5/14 15:00 | WQ | HNO3 pH<2 | 1 - 250 mL Poly | 10 day | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-060514 | 6/5/14 15:00 | WQ | None | 2 - 250 mL Amber | 10 day | | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-060514 | 6/5/14 15:00 | WQ | None | 1 - 250 mL Poly | 10 day | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| EB-060514 | 6/5/14 15:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| EB-060514 | 6/5/14 15:00 | WQ | HCl | 2 - 1 L Amber | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| EB-060514 | 6/5/14 15:00 | WQ | None | 2 - 1 L Amber | 10 day | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel cleanup required on half the extract. Analyze both extracts for EFH.

**Sampler:** Pa Hart

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steg J Myse | 06/05/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [illegible] | 6-6-14 | 915 |

Final Data Gap Block 2 1 of 2

COC Rev 4

COC: 20140605-01, Page 1 of 1

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/5/2014
CarrierName: FedEx
AirbillNo: 770212567524

A-13013
G-1479956
S-7489903-09

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140605-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc. Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FDG2-SL-631-SA8-SB-0.0-0.5 | 6/5/14 08:15 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| FDG2-SL-631-SA8-SB-4.5-5.0 | 6/5/14 08:50 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-631-SA8-SB-4.5-5.0 | 6/5/14 08:50 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| FDG2-SL-631-SA8-SB-7.0-8.0 | 6/5/14 09:40 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-631-SA8-SB-7.0-8.0 | 6/5/14 09:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-631-SA8-SB-7.0-8.0 | 6/5/14 09:40 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| TB1-060514 | 6/5/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-624-SA8-SB-0.0-0.5 | 6/5/14 13:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-625-SA8-SB-0.0-0.5 | 6/5/14 13:55 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel cleanup required on half the extract. Analyze both extracts for EFH.

**Sampler:** R Roberts

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stacy Mupel | 06/05/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 6/6/14 | 915 |

Final Data Gap Block 2 2of2

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16617

Group Number(s): 1479956

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/06/2014 9:15 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:35 on 06/06/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT146 | 1.4 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/07/2014
Group Number: 1480241
SDG: PH221
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB1-060614 Water | 7491482 |
| FDG2-SL-626-SA8-SB-0.0-0.5 Soil | 7491483 |
| FDG2-SL-626-SA8-SB-4.0-5.0 Soil | 7491484 |
| FDG2-SL-691-SA6-SB-0.0-0.5 Soil | 7491485 |
| FDG2-SL-692-SA6-SB-0.0-0.5 Soil | 7491486 |
| FDG2-SL-693-SA6-SB-0.0-0.5 Soil | 7491487 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB1-060614 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7491482**
**LL Group # 1480241**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 08:00

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2101 SDG#: PH221-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14167A94A | 06/17/2014 11:34 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14167A94A | 06/17/2014 11:34 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-626-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7491483**
**LL Group # 1480241**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 07:45 by RR

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2102 SDG#: PH221-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.3 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 8.5 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 15 | | 10 | 4.0 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.0 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

The reverse surrogate, capric acid, is present at <1%.
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 20:47 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 09:01 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-626-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7491484**
**LL Group # 1480241**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 08:20 by RR

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2103 SDG#: PH221-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.1 | U | 1.1 | 0.2 | 25 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 6.8 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 16 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 69 | | 5.3 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 35 | | 11 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 3.3 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | J | 5.3 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | U | 11 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.3 | U | 5.3 | 2.1 | 1 |

Due to the presence of fuel in the sample extract, capric acid recovery can not be determined.
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.2 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/13/2014 22:11 | Marie D Beamenderfer | 25 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201415834745 | 06/07/2014 11:58 | Stephanie A Sanchez | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201415834745 | 06/07/2014 11:58 | Stephanie A Sanchez | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/13/2014 01:27 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 09:23 | Heather E Williams | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-626-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7491484**
**LL Group # 1480241**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 08:20 by RR

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2103 SDG#: PH221-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-691-SA6-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7491485**
**LL Group # 1480241**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 09:35 by RR

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2104 SDG#: PH221-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.2 | J | 5.0 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 13 | | 5.0 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 19 | | 10 | 4.0 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.0 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 0.93 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 22:13 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 09:45 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-692-SA6-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7491486**
**LL Group # 1480241**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 11:40 by RR

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2105 SDG#: PH221-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 10 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 23 | | 10 | 4.0 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.0 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.1 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 21:08 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 10:06 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-693-SA6-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7491487**
**LL Group # 1480241**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 10:30 by RR

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:14

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2106 SDG#: PH221-06*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 12 | | 5.0 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 24 | | 10 | 4.0 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.4 | J | 5.0 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.0 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.0 | U | 5.0 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 0.85 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141600037A | 06/12/2014 21:30 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141600038A | 06/13/2014 10:28 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141600038A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141600037A | 06/10/2014 16:55 | JoElla L Rice | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480241
Reported: 07/07/14 at 12:14 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14164A16A | Sample number(s): 7491484 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 14167A94A | Sample number(s): 7491482 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 98 | 103 | 80-133 | 5 | 30 |
| Batch number: 141600037A | Sample number(s): 7491483-7491487 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 84 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 86 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 85 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 58 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 71 | | 60-115 | | |
| Batch number: 141600038A | Sample number(s): 7491483-7491487 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 74* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 77* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 78 | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 65 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 56* | | 60-115 | | |
| Batch number: 14164162401A | Sample number(s): 7491483-7491487 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14164A16A | Sample number(s): 7491484 UNSPK: P494363 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 80 | 80 | 69-123 | 6 | 30 | | | | |
| Batch number: 141600037A | Sample number(s): 7491483-7491487 UNSPK: P489904 | | | | | | | | |
| EFH (C12-C14) | 94 | 90 | 49-123 | 4 | 20 | | | | |
| EFH (C15-C20) | 91 | 92 | 49-123 | 1 | 20 | | | | |
| EFH (C21-C30) | 100 | 101 | 49-123 | 0 | 20 | | | | |
| EFH (C30-C40) | 134* | 156* | 49-123 | 5 | 20 | | | | |
| EFH (C8-C11) | 94 | 101 | 49-123 | 7 | 20 | | | | |
| Batch number: 141600038A | Sample number(s): 7491483-7491487 UNSPK: P489904 | | | | | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480241
Reported: 07/07/14 at 12:14 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| EFH C12-C14 w/ SiGel | 71 | 76 | 49-123 | 6 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 75 | 79 | 49-123 | 5 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 77 | 83 | 49-123 | 6 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 77 | 87 | 49-123 | 10 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 54 | 58 | 49-123 | 8 | 20 | | | | |
| Batch number: 14164162401A | Sample number(s): 7491483-7491487 | | | | | BKG: P492844 | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.6 | 3.6 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14164A16A

| | Trifluorotoluene-F |
|---|---|
| 7491484 | 87 |
| Blank | 101 |
| LCS | 94 |
| MS | 81 |
| MSD | 75 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14167A94A

| | Trifluorotoluene-F |
|---|---|
| 7491482 | 82 |
| Blank | 85 |
| LCS | 93 |
| LCSD | 91 |
| Limits: | 63-135 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141600037A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7491483 | 95 | 97 |
| 7491484 | 91 | 95 |
| 7491485 | 85 | 85 |
| 7491486 | 87 | 108 |
| 7491487 | 79 | 85 |
| Blank | 70 | 84 |
| LCS | 82 | 84 |
| MS | 84 | 90 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480241
Reported: 07/07/14 at 12:14 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| MSD | 82 | 86 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141600038A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7491483 | 80 | 85 |
| 7491484 | 53 | 73 |
| 7491485 | 66 | 70 |
| 7491486 | 70 | 78 |
| 7491487 | 56 | 70 |
| Blank | 65 | 83 |
| LCS | 67 | 76 |
| MS | 66 | 74 |
| MSD | 74 | 86 |
| Limits: | 37-125 | 66-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct# 13013 Gap# 1480241 Sample# 7491482-87

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/6/2014
CarrierName: FedEx
AirbillNo: 770224383242

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140606-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike, Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc. Nitrate - Nitrite - TKN | TOC SM 5310B | Grain Size ASTM 2488--09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB1-060614 | 6/6/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| FDG2-SL-626-SA8-SB-0.0-0.5 | 6/6/14 07:45 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-626-SA8-SB-4.0-5.0 | 6/6/14 08:20 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-626-SA8-SB-4.0-5.0 | 6/6/14 08:20 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-691-SA6-SB-0.0-0.5 | 6/6/14 09:35 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-692-SA6-SB-0.0-0.5 | 6/6/14 11:40 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-693-SA6-SB-0.0-0.5 | 6/6/14 10:30 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel cleanup required on half the extract. Analyze both extracts for EFH.

Sampler: Rudy Robertson

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Greg Mysell | 6/6/14 | 1500 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 6/7/14 | 0915 |

Final Data Gap Block 2 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16774

Group Number(s): 1480241

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/07/2014 9:15 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:24 on 06/07/2014

## Samples Chilled Details

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 2.0 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425



T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/07/2014
Group Number: 1480242
SDG: PH222
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-060614 Water | 7491488 |
| SVL-627-SA5A-SB-3.0-3.5 Soil | 7491489 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB2-060614 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7491488**
**LL Group # 1480242**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 08:00

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P22TB SDG#: PH222-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | | **ug/l** | **ug/l** | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-060614 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7491488**
**LL Group # 1480242**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 08:00

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P22TB SDG#: PH222-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141621AA | 06/11/2014 11:03 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141621AA | 06/11/2014 11:03 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-627-SA5A-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7491489**
**LL Group # 1480242**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 09:13 by VV

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2201 SDG#: PH222-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 16 | J | 22 | 8 | 1.04 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 1.04 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 1.04 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.04 |
| 10237 | t-Butyl alcohol | 75-65-0 | 54 | U | 54 | 22 | 1.04 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.04 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.04 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-627-SA5A-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7491489**
**LL Group # 1480242**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 09:13 by VV

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2201 SDG#: PH222-02*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.04 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.04 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.04 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.04 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.04 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.04 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.04 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.04 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.04 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.04 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.04 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.7 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141642AA | 06/14/2014 05:39 | Stephanie A Selis | 1.04 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201415834745 | 06/07/2014 12:05 | Stephanie A Sanchez | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-627-SA5A-SB-3.0-3.5 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7491489**
**LL Group # 1480242**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/06/2014 09:13 by VV

Submitted: 06/07/2014 09:15
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

P2201 SDG#: PH222-02*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201415834745 | 06/07/2014 12:05 | Stephanie A Sanchez | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201415834745 | 06/07/2014 11:59 | Stephanie A Sanchez | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14162162401B | 06/11/2014 20:09 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480242
Reported: 07/07/14 at 12:15 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141642AA | Sample number(s): 7491489 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 114 | 103 | 41-149 | 10 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 84 | 78 | 50-137 | 8 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 90 | 98 | 58-123 | 9 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 94 | 99 | 63-130 | 5 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 102 | 103 | 80-120 | 1 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 107 | 101 | 78-120 | 6 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 107 | 108 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 100 | 102 | 75-120 | 2 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 103 | 108 | 70-126 | 5 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 111 | 105 | 32-162 | 5 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 84 | 89 | 47-136 | 6 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 105 | 106 | 66-133 | 1 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 102 | 95 | 72-120 | 8 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 92 | 69-120 | 7 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 105 | 95 | 75-120 | 9 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 104 | 99 | 63-128 | 4 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 109 | 109 | 69-130 | 0 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 106 | 106 | 80-120 | 0 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 17-171 | 2 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 73 | 80 | 52-134 | 8 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 108 | 108 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 73 | 72 | 70-130 | 2 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 98 | 101 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 99 | 78-120 | 4 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 107 | 102 | 79-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 70 | 68 | 22-131 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 94 | 94 | 50-132 | 0 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 108 | 77-120 | 2 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 102 | 107 | 80-120 | 5 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 98 | 103 | 75-120 | 5 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 109 | 101 | 80-120 | 8 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 109 | 103 | 80-120 | 6 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 107 | 101 | 80-120 | 6 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 105 | 100 | 26-137 | 4 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 108 | 108 | 66-136 | 0 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 116 | 117 | 73-129 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 105 | 105 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 117 | 117 | 79-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 96 | 97 | 77-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 95 | 100 | 73-120 | 4 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 104 | 105 | 72-123 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480242
Reported: 07/07/14 at 12:15 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 106 | 107 | 77-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 99 | 74-120 | 3 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 100 | 69-120 | 4 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 93 | 98 | 59-134 | 5 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 106 | 102 | 64-137 | 3 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 111 | 106 | 78-120 | 5 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 110 | 104 | 46-130 | 6 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | 90 | 40-129 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 94 | 97 | 68-128 | 2 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | 105 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 103 | 95 | 69-120 | 8 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 121 | 117 | 72-130 | 3 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 103 | 106 | 69-126 | 3 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 84 | 93 | 43-133 | 10 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 119 | 116 | 80-124 | 2 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | 97 | 77-120 | 7 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 106 | 107 | 76-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 110 | 109 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 95 | 90 | 71-123 | 5 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | 109 | 78-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 102 | 103 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | 102 | 64-120 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | 102 | 68-120 | 4 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 98 | 63-135 | 0 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 106 | 107 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 107 | 105 | 58-133 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 104 | 98 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 107 | 98 | 79-120 | 9 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | 99 | 78-120 | 7 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 103 | 102 | 40-127 | 1 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 106 | 103 | 59-120 | 3 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 1 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 80-120 | 1 | 30 |
| Batch number: Y141621AA | Sample number(s): 7491488 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 93 | 93 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 73 | 74 | 52-129 | 0 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 93 | 93 | 62-120 | 1 | 30 |
| t-Amyl methyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 75-120 | 2 | 30 |
| Benzene | 1 | U | 1. | 0.5 | ug/l | 95 | 98 | 78-120 | 2 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 99 | 100 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 73-120 | 2 | 30 |
| Bromoform | 4 | U | 4. | 0.5 | ug/l | 87 | 87 | 61-120 | 1 | 30 |
| Bromomethane | 1 | U | 1. | 0.5 | ug/l | 101 | 103 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 89 | 89 | 54-133 | 0 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 98 | 97 | 75-120 | 0 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 89 | 91 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 96 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 90 | 91 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 | U | 1. | 0.5 | ug/l | 103 | 104 | 74-130 | 1 | 30 |
| Chlorobenzene | 1 | U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480242
Reported: 07/07/14 at 12:15 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 1 | U | 1. | 0.5 | ug/l | 93 | 97 | 56-120 | 5 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 105 | 108 | 54-126 | 3 | 30 |
| Chloroform | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 81 | 84 | 80-120 | 3 | 30 |
| Chloromethane | 1 | U | 1. | 0.5 | ug/l | 101 | 106 | 63-120 | 5 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 55 | 54 | 47-120 | 1 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 86 | 86 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 95 | 96 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 97 | 98 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 1 | U | 1. | 0.5 | ug/l | 103 | 103 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 98 | 80-120 | 6 | 30 |
| 1,2-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 100 | 103 | 65-135 | 3 | 30 |
| 1,1-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 109 | 111 | 76-124 | 2 | 30 |
| cis-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 113 | 115 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 80-120 | 3 | 30 |
| 1,3-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 98 | 97 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 101 | 103 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 92 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 92 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 97 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 98 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 98 | 100 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 87 | 91 | 51-125 | 4 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 88 | 88 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 109 | 75-128 | 2 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 108 | 108 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 90 | 91 | 51-124 | 1 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 107 | 109 | 80-120 | 2 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 89 | 89 | 70-120 | 1 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 103 | 107 | 80-120 | 4 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 90 | 94 | 58-126 | 3 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 96 | 65-120 | 2 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 89 | 90 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 102 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 65-130 | 1 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 94 | 94 | 76-120 | 0 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 77 | 76 | 56-135 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480242
Reported: 07/07/14 at 12:15 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 99 | 103 | 63-120 | 3 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 94 | 97 | 80-120 | 3 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Batch number: 14162162401B | Sample number(s): 7491489 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14162162401B | Sample number(s): 7491489 | | | BKG: P489863 | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 4.5 | 4.4 | 1 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141642AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7491489 | 106 | 108 | 97 | 92 |
| Blank | 107 | 108 | 98 | 93 |
| LCS | 105 | 103 | 100 | 104 |
| LCSD | 104 | 103 | 100 | 99 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141621AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7491488 | 99 | 98 | 96 | 95 |
| Blank | 100 | 98 | 96 | 95 |
| LCS | 100 | 96 | 97 | 97 |
| LCSD | 101 | 98 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct#13013 Qp#1480242 sample# 7491488-89

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/6/2014
CarrierName: FedEx
AirbillNo: 770224383242

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140606-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc. Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-060614 | 6/6/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-627-SA5A-SB-3.0-3.5 | 6/6/14 09:13 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-627-SA5A-SB-3.0-3.5 | 6/6/14 09:13 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:**

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 6/7/14 | 0915 |

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16774

Group Number(s): 1480342

Client: CDM Smith

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/07/2014 9:15 |
| Number of Packages: | 1 | Number of Projects: | 1 |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | N/A | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Joseph Gruber (5200) at 11:24 on 06/07/2014

## Samples Chilled Details

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT131 | 2.0 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

# ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/10/2014
Group Number: 1480550
SDG: PH223
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| SVL-611-SA5A-SB-1.35-1.85 Soil | 7492844 |
| TB-060914 Water | 7492845 |
| SVL-527-SA6-SB-2.0-3.0 Soil | 7492846 |
| SVL-574-SA6-SB-3.8-4.3 Soil | 7492847 |
| SVL-630-SA5A-SB-1.5-2.0 Soil | 7492848 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** SVL-611-SA5A-SB-1.35-1.85 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7492844**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 10:39 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61113 SDG#: PH223-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 19 | U | 19 | 7 | 0.94 |
| 10237 | Acrolein | 107-02-8 | 97 | U | 97 | 19 | 0.94 |
| 10237 | Acrylonitrile | 107-13-1 | 19 | U | 19 | 4 | 0.94 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.94 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.94 |
| 10237 | t-Butyl alcohol | 75-65-0 | 49 | U | 49 | 19 | 0.94 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.94 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.94 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.94 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.94 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.94 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.94 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-611-SA5A-SB-1.35-1.85 Soil
SSFL Phase 3 Subarea 5A

**LL Sample # SW 7492844**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 10:39 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61113 SDG#: PH223-01

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.94 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.94 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.94 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.94 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.94 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.94 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.94 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.94 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.94 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.94 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.94 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/11/2014 01:58 | Chelsea B Stong | 0.94 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:25 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-611-SA5A-SB-1.35-1.85 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7492844**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 10:39 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61113 SDG#: PH223-01

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416134761 | 06/10/2014 12:24 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:19 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-060914 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7492845**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:00

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB609 SDG#: PH223-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB-060914 Water**
**SSFL Phase 3 Subarea 5A**

**LL Sample # WW 7492845**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:00

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB609 SDG#: PH223-02TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141621AA | 06/11/2014 11:25 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141621AA | 06/11/2014 11:25 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-527-SA6-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7492846**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 13:25 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52720 SDG#: PH223-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | Acetone | 67-64-1 | 22 | U | 22 | 8 | 0.99 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 22 | 0.99 |
| 10237 | Acrylonitrile | 107-13-1 | 22 | U | 22 | 4 | 0.99 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Benzene | 71-43-2 | 6 | U | 6 | 0.6 | 0.99 |
| 10237 | Bromobenzene | 108-86-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromochloromethane | 74-97-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromodichloromethane | 75-27-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromoform | 75-25-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Bromomethane | 74-83-9 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 0.99 |
| 10237 | t-Butyl alcohol | 75-65-0 | 56 | U | 56 | 22 | 0.99 |
| 10237 | n-Butylbenzene | 104-51-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | sec-Butylbenzene | 135-98-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | tert-Butylbenzene | 98-06-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Carbon Disulfide | 75-15-0 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chlorobenzene | 108-90-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chloroethane | 75-00-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 0.99 |
| 10237 | Chloroform | 67-66-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1-Chlorohexane | 544-10-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chloromethane | 74-87-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Dibromochloromethane | 124-48-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Dibromomethane | 74-95-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 6 | U | 6 | 1 | 0.99 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Ethylbenzene | 100-41-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Freon 113 | 76-13-1 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Freon 133a | 75-88-7 | 6 | U | 6 | 2 | 0.99 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 0.99 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-527-SA6-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7492846**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 13:25 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52720 SDG#: PH223-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Isopropylbenzene | 98-82-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Methyl Iodide | 74-88-4 | 6 | U | 6 | 3 | 0.99 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 6 | U | 6 | 0.6 | 0.99 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 0.99 |
| 10237 | Methylene Chloride | 75-09-2 | 6 | U | 6 | 2 | 0.99 |
| 10237 | n-Propylbenzene | 103-65-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Styrene | 100-42-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Tetrachloroethene | 127-18-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Toluene | 108-88-3 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Trichloroethene | 79-01-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 6 | U | 6 | 2 | 0.99 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 6 | U | 6 | 1 | 0.99 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 6 | U | 6 | 1 | 0.99 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 0.99 |
| 10237 | Vinyl Chloride | 75-01-4 | 6 | U | 6 | 1 | 0.99 |
| 10237 | m+p-Xylene | 179601-23-1 | 6 | U | 6 | 1 | 0.99 |
| 10237 | o-Xylene | 95-47-6 | 6 | U | 6 | 1 | 0.99 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 11.0 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/11/2014 02:20 | Chelsea B Stong | 0.99 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:24 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-527-SA6-SB-2.0-3.0 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7492846**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 13:25 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

52720 SDG#: PH223-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416134761 | 06/10/2014 12:24 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:21 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** SVL-574-SA6-SB-3.8-4.3 Soil
SSFL Phase 3 Subarea 6

**LL Sample # SW 7492847**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 14:48 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57438 SDG#: PH223-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 11 | J | 20 | 7 | 0.96 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.96 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.96 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.96 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.96 |
| 10237 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 20 | 0.96 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.96 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.96 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.96 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.96 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.96 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.96 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-574-SA6-SB-3.8-4.3 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7492847**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 14:48 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57438 SDG#: PH223-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.96 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.96 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.96 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.96 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.96 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.96 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.96 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.96 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.96 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.96 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.96 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141612AA | 06/11/2014 02:42 | Chelsea B Stong | 0.96 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:24 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-574-SA6-SB-3.8-4.3 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7492847**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 14:48 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57438 SDG#: PH223-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416134761 | 06/10/2014 12:24 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:17 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-630-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7492848**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 13:54 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63015 SDG#: PH223-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 1.01 |
| 10237 | Acrolein | 107-02-8 | 110 | U | 110 | 21 | 1.01 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 1.01 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 1.01 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Butanone | 78-93-3 | 11 | U | 11 | 4 | 1.01 |
| 10237 | t-Butyl alcohol | 75-65-0 | 53 | U | 53 | 21 | 1.01 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 11 | U | 11 | 2 | 1.01 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 1.01 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1.01 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 2-Hexanone | 591-78-6 | 11 | U | 11 | 3 | 1.01 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-630-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7492848**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 13:54 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63015 SDG#: PH223-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 1.01 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 1.01 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 11 | U | 11 | 3 | 1.01 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 1.01 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 1.01 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1.01 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1.01 |
| 10237 | Vinyl Acetate | 108-05-4 | 11 | U | 11 | 2 | 1.01 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 1.01 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 1.01 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 1.01 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 5.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141642AA | 06/14/2014 08:15 | Stephanie A Selis | 1.01 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:24 | Larry E Bevins | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-630-SA5A-SB-1.5-2.0 Soil**
**SSFL Phase 3 Subarea 5A**

**LL Sample # SW 7492848**
**LL Group # 1480550**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 13:54 by AP

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:15

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63015 SDG#: PH223-05*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416134761 | 06/10/2014 12:24 | Larry E Bevins | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416134761 | 06/10/2014 12:23 | Larry E Bevins | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401A | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141612AA | Sample number(s): 7492844,7492846-7492847 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 106 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 88 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 103 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 99 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 106 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 113 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 99 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 106 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 101 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 121 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 96 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 107 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 110 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 100 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 87 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 111 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 81 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 103 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 98 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 100 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 79 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 99 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 105 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 106 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 97 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 107 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 105 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 109 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 116 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 113 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 101 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 99 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 110 | | 72-123 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 112 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 102 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 100 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 103 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 105 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 104 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 94 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 95 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 104 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 93 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 115 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 108 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 102 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 117 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 100 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 102 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 103 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 99 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 98 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 102 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 94 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 96 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 101 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 108 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 103 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 104 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 65 | | 40-127 | | |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 107 | | 59-120 | | |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 101 | | 80-120 | | |
| Batch number: B141642AA | Sample number(s): 7492848 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 114 | 103 | 41-149 | 10 | 30 |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 84 | 78 | 50-137 | 8 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 90 | 98 | 58-123 | 9 | 30 |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 94 | 99 | 63-130 | 5 | 30 |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 102 | 103 | 80-120 | 1 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 107 | 101 | 78-120 | 6 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 107 | 108 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 100 | 102 | 75-120 | 2 | 30 |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 103 | 108 | 70-126 | 5 | 30 |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 111 | 105 | 32-162 | 5 | 30 |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 84 | 89 | 47-136 | 6 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 105 | 106 | 66-133 | 1 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 102 | 95 | 72-120 | 8 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 99 | 92 | 69-120 | 7 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 95 | 75-120 | 9 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 104 | 99 | 63-128 | 4 | 30 |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 109 | 109 | 69-130 | 0 | 30 |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 106 | 106 | 80-120 | 0 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 17-171 | 2 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 73 | 80 | 52-134 | 8 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 108 | 108 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 73 | 72 | 70-130 | 2 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 98 | 101 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 99 | 78-120 | 4 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 107 | 102 | 79-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 70 | 68 | 22-131 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 94 | 94 | 50-132 | 0 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 108 | 77-120 | 2 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 102 | 107 | 80-120 | 5 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 98 | 103 | 75-120 | 5 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 109 | 101 | 80-120 | 8 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 109 | 103 | 80-120 | 6 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 107 | 101 | 80-120 | 6 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 105 | 100 | 26-137 | 4 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 108 | 108 | 66-136 | 0 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 116 | 117 | 73-129 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 105 | 105 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 117 | 117 | 79-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 96 | 97 | 77-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 95 | 100 | 73-120 | 4 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 104 | 105 | 72-123 | 1 | 30 |
| 1,1-Dichloropropene | 5 U | 5. | 1 | ug/kg | 106 | 107 | 77-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 U | 5. | 1 | ug/kg | 96 | 99 | 74-120 | 3 | 30 |
| trans-1,3-Dichloropropene | 5 U | 5. | 1 | ug/kg | 96 | 100 | 69-120 | 4 | 30 |
| Ethyl t-butyl ether | 5 U | 5. | 1 | ug/kg | 93 | 98 | 59-134 | 5 | 30 |
| Ethylbenzene | 5 U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| Freon 113 | 5 U | 5. | 2 | ug/kg | 106 | 102 | 64-137 | 3 | 30 |
| Freon 133a | 5 U | 5. | 2 | ug/kg | 111 | 106 | 78-120 | 5 | 30 |
| Hexachlorobutadiene | 5 U | 5. | 2 | ug/kg | 110 | 104 | 46-130 | 6 | 30 |
| 2-Hexanone | 10 U | 10. | 3 | ug/kg | 83 | 90 | 40-129 | 8 | 30 |
| di-Isopropyl ether | 5 U | 5. | 1 | ug/kg | 94 | 97 | 68-128 | 2 | 30 |
| Isopropylbenzene | 5 U | 5. | 1 | ug/kg | 106 | 105 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 U | 5. | 1 | ug/kg | 103 | 95 | 69-120 | 8 | 30 |
| Methyl Iodide | 5 U | 5. | 3 | ug/kg | 121 | 117 | 72-130 | 3 | 30 |
| Methyl Tertiary Butyl Ether | 5 U | 5. | 0.5 | ug/kg | 103 | 106 | 69-126 | 3 | 30 |
| 4-Methyl-2-pentanone | 10 U | 10. | 3 | ug/kg | 84 | 93 | 43-133 | 10 | 30 |
| Methylene Chloride | 5 U | 5. | 2 | ug/kg | 119 | 116 | 80-124 | 2 | 30 |
| n-Propylbenzene | 5 U | 5. | 1 | ug/kg | 103 | 97 | 77-120 | 7 | 30 |
| Styrene | 5 U | 5. | 1 | ug/kg | 106 | 107 | 76-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 U | 5. | 1 | ug/kg | 110 | 109 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 U | 5. | 1 | ug/kg | 95 | 90 | 71-123 | 5 | 30 |
| Tetrachloroethene | 5 U | 5. | 1 | ug/kg | 107 | 109 | 78-120 | 1 | 30 |
| Toluene | 5 U | 5. | 1 | ug/kg | 102 | 103 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 U | 5. | 1 | ug/kg | 104 | 102 | 64-120 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 U | 5. | 1 | ug/kg | 107 | 102 | 68-120 | 4 | 30 |
| 1,1,1-Trichloroethane | 5 U | 5. | 1 | ug/kg | 98 | 98 | 63-135 | 0 | 30 |
| 1,1,2-Trichloroethane | 5 U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 1 | 30 |
| Trichloroethene | 5 U | 5. | 1 | ug/kg | 106 | 107 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 U | 5. | 2 | ug/kg | 107 | 105 | 58-133 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 U | 5. | 1 | ug/kg | 104 | 98 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 U | 5. | 1 | ug/kg | 107 | 98 | 79-120 | 9 | 30 |
| 1,3,5-Trimethylbenzene | 5 U | 5. | 1 | ug/kg | 106 | 99 | 78-120 | 7 | 30 |
| Vinyl Acetate | 10 U | 10. | 2 | ug/kg | 103 | 102 | 40-127 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 106 | 103 | 59-120 | 3 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 1 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 80-120 | 1 | 30 |
| Batch number: Y141621AA | Sample number(s): 7492845 | | | | | | | | | |
| Acetone | 20 | U | 20. | 6 | ug/l | 93 | 93 | 43-149 | 1 | 30 |
| Acrolein | 100 U | | 100. | 40 | ug/l | 73 | 74 | 52-129 | 0 | 30 |
| Acrylonitrile | 20 | U | 20. | 4 | ug/l | 93 | 93 | 62-120 | 1 | 30 |
| t-Amyl methyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 75-120 | 2 | 30 |
| Benzene | 1 | U | 1. | 0.5 | ug/l | 95 | 98 | 78-120 | 2 | 30 |
| Bromobenzene | 5 | U | 5. | 1 | ug/l | 99 | 99 | 80-120 | 1 | 30 |
| Bromochloromethane | 5 | U | 5. | 1 | ug/l | 99 | 100 | 80-121 | 1 | 30 |
| Bromodichloromethane | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 73-120 | 2 | 30 |
| Bromoform | 4 | U | 4. | 0.5 | ug/l | 87 | 87 | 61-120 | 1 | 30 |
| Bromomethane | 1 | U | 1. | 0.5 | ug/l | 101 | 103 | 58-120 | 1 | 30 |
| 2-Butanone | 10 | U | 10. | 3 | ug/l | 89 | 89 | 54-133 | 0 | 30 |
| t-Butyl alcohol | 50 | U | 50. | 5 | ug/l | 98 | 97 | 75-120 | 0 | 30 |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/l | 89 | 91 | 68-120 | 3 | 30 |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/l | 95 | 96 | 73-120 | 1 | 30 |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/l | 90 | 91 | 58-126 | 0 | 30 |
| Carbon Tetrachloride | 1 | U | 1. | 0.5 | ug/l | 103 | 104 | 74-130 | 1 | 30 |
| Chlorobenzene | 1 | U | 1. | 0.5 | ug/l | 96 | 98 | 80-120 | 2 | 30 |
| Chloroethane | 1 | U | 1. | 0.5 | ug/l | 93 | 97 | 56-120 | 5 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/l | 105 | 108 | 54-126 | 3 | 30 |
| Chloroform | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 80-122 | 0 | 30 |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/l | 81 | 84 | 80-120 | 3 | 30 |
| Chloromethane | 1 | U | 1. | 0.5 | ug/l | 101 | 106 | 63-120 | 5 | 30 |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/l | 55 | 54 | 47-120 | 1 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/l | 86 | 86 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 | U | 1. | 0.5 | ug/l | 96 | 97 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 76-120 | 1 | 30 |
| Dibromomethane | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 95 | 96 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/l | 97 | 98 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 1 | U | 1. | 0.5 | ug/l | 103 | 103 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 92 | 98 | 80-120 | 6 | 30 |
| 1,2-Dichloroethane | 1 | U | 1. | 0.5 | ug/l | 100 | 103 | 65-135 | 3 | 30 |
| 1,1-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 109 | 111 | 76-124 | 2 | 30 |
| cis-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 97 | 98 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 1 | U | 1. | 0.5 | ug/l | 113 | 115 | 80-120 | 2 | 30 |
| 1,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 91 | 94 | 80-120 | 3 | 30 |
| 1,3-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| 2,2-Dichloropropane | 1 | U | 1. | 0.5 | ug/l | 98 | 97 | 67-124 | 1 | 30 |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/l | 101 | 103 | 80-120 | 3 | 30 |
| cis-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 90 | 92 | 80-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1 | U | 1. | 0.5 | ug/l | 91 | 92 | 76-120 | 0 | 30 |
| Ethyl t-butyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 97 | 74-120 | 2 | 30 |
| Ethylbenzene | 1 | U | 1. | 0.5 | ug/l | 95 | 96 | 79-120 | 1 | 30 |
| Freon 113 | 10 | U | 10. | 2 | ug/l | 98 | 98 | 67-127 | 1 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/l | 98 | 100 | 46-152 | 2 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/l | 87 | 91 | 51-125 | 4 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 88 | 88 | 44-126 | 0 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 65-120 | 1 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 93 | 93 | 80-120 | 1 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 107 | 109 | 75-128 | 2 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 108 | 108 | 75-120 | 1 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 90 | 91 | 51-124 | 1 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 107 | 109 | 80-120 | 2 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 80-120 | 1 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 89 | 89 | 70-120 | 1 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 103 | 107 | 80-120 | 4 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 96 | 96 | 80-120 | 0 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 90 | 94 | 58-126 | 3 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 94 | 96 | 65-120 | 2 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 89 | 90 | 66-126 | 1 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 94 | 95 | 80-120 | 1 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 100 | 102 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 100 | 100 | 65-130 | 1 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 94 | 94 | 76-120 | 0 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 74-120 | 2 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 96 | 97 | 74-120 | 1 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 77 | 76 | 56-135 | 1 | 30 |
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 99 | 103 | 63-120 | 3 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 94 | 97 | 80-120 | 3 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 94 | 96 | 80-120 | 2 | 30 |
| Batch number: 14164162401A | Sample number(s): 7492844,7492846-7492848 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141612AA | Sample number(s): 7492844,7492846-7492847 UNSPK: P488099 | | | | | | | | |
| Acetone | 89 | 96 | 31-195 | 6 | 30 | | | | |
| Acrolein | 85 | 89 | 10-165 | 4 | 30 | | | | |
| Acrylonitrile | 87 | 85 | 48-139 | 4 | 30 | | | | |
| t-Amyl methyl ether | 94 | 97 | 50-132 | 2 | 30 | | | | |
| Benzene | 105 | 105 | 55-143 | 1 | 30 | | | | |
| Bromobenzene | 103 | 103 | 43-139 | 1 | 30 | | | | |
| Bromochloromethane | 124 | 115 | 60-137 | 9 | 30 | | | | |
| Bromodichloromethane | 97 | 97 | 53-136 | 1 | 30 | | | | |
| Bromoform | 93 | 91 | 50-144 | 4 | 30 | | | | |
| Bromomethane | 111 | 112 | 42-168 | 0 | 30 | | | | |
| 2-Butanone | 81 | 86 | 37-163 | 4 | 30 | | | | |
| t-Butyl alcohol | 126 | 123 | 47-153 | 4 | 30 | | | | |
| n-Butylbenzene | 97 | 99 | 30-146 | 1 | 30 | | | | |
| sec-Butylbenzene | 103 | 104 | 33-157 | 1 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | 105 | 107 | 41-152 | 0 | 30 | | | | |
| Carbon Disulfide | 112 | 111 | 48-146 | 2 | 30 | | | | |
| Carbon Tetrachloride | 114 | 114 | 51-165 | 1 | 30 | | | | |
| Chlorobenzene | 105 | 103 | 49-135 | 3 | 30 | | | | |
| Chloroethane | 107 | 106 | 39-152 | 3 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 70 | 78 | 32-139 | 9 | 30 | | | | |
| Chloroform | 108 | 108 | 61-142 | 1 | 30 | | | | |
| 1-Chlorohexane | 94 | 98 | 70-130 | 2 | 30 | | | | |
| Chloromethane | 109 | 112 | 36-143 | 1 | 30 | | | | |
| 2-Chlorotoluene | 104 | 103 | 42-146 | 2 | 30 | | | | |
| 4-Chlorotoluene | 105 | 105 | 39-145 | 2 | 30 | | | | |
| Chlorotrifluoroethene | 91 | 108 | 70-130 | 16 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 85 | 88 | 34-165 | 1 | 30 | | | | |
| Dibromochloromethane | 105 | 98 | 51-128 | 8 | 30 | | | | |
| 1,2-Dibromoethane | 100 | 99 | 54-129 | 2 | 30 | | | | |
| Dibromomethane | 94 | 98 | 57-130 | 2 | 30 | | | | |
| 1,2-Dichlorobenzene | 97 | 100 | 36-133 | 2 | 30 | | | | |
| 1,3-Dichlorobenzene | 101 | 103 | 34-134 | 1 | 30 | | | | |
| 1,4-Dichlorobenzene | 101 | 101 | 35-136 | 1 | 30 | | | | |
| Dichlorodifluoromethane | 123 | 123 | 26-151 | 1 | 30 | | | | |
| 1,1-Dichloroethane | 103 | 103 | 63-142 | 1 | 30 | | | | |
| 1,2-Dichloroethane | 103 | 106 | 54-143 | 2 | 30 | | | | |
| 1,1-Dichloroethene | 121 | 119 | 61-149 | 3 | 30 | | | | |
| cis-1,2-Dichloroethene | 106 | 108 | 67-135 | 0 | 30 | | | | |
| trans-1,2-Dichloroethene | 120 | 112 | 64-144 | 8 | 30 | | | | |
| 1,2-Dichloropropane | 98 | 98 | 54-144 | 1 | 30 | | | | |
| 1,3-Dichloropropane | 96 | 95 | 51-140 | 2 | 30 | | | | |
| 2,2-Dichloropropane | 109 | 111 | 53-147 | 0 | 30 | | | | |
| 1,1-Dichloropropene | 113 | 114 | 54-145 | 1 | 30 | | | | |
| cis-1,3-Dichloropropene | 94 | 96 | 45-137 | 1 | 30 | | | | |
| trans-1,3-Dichloropropene | 100 | 98 | 51-134 | 3 | 30 | | | | |
| Ethyl t-butyl ether | 95 | 97 | 58-124 | 1 | 30 | | | | |
| Ethylbenzene | 109 | 106 | 44-141 | 4 | 30 | | | | |
| Freon 113 | 114 | 111 | 56-156 | 4 | 30 | | | | |
| Freon 133a | 111 | 132* | 61-131 | 17 | 30 | | | | |
| Hexachlorobutadiene | 90 | 84 | 10-155 | 8 | 30 | | | | |
| 2-Hexanone | 80 | 81 | 32-160 | 0 | 30 | | | | |
| di-Isopropyl ether | 98 | 99 | 59-133 | 0 | 30 | | | | |
| Isopropylbenzene | 106 | 103 | 38-144 | 4 | 30 | | | | |
| p-Isopropyltoluene | 102 | 98 | 29-152 | 5 | 30 | | | | |
| Methyl Iodide | 116 | 115 | 52-139 | 2 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 98 | 99 | 55-129 | 0 | 30 | | | | |
| 4-Methyl-2-pentanone | 80 | 84 | 46-139 | 4 | 30 | | | | |
| Methylene Chloride | 112 | 117 | 60-149 | 4 | 30 | | | | |
| n-Propylbenzene | 106 | 107 | 39-157 | 0 | 30 | | | | |
| Styrene | 104 | 107 | 35-134 | 2 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 106 | 104 | 55-139 | 3 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 90 | 95 | 29-182 | 4 | 30 | | | | |
| Tetrachloroethene | 109 | 107 | 42-149 | 4 | 30 | | | | |
| Toluene | 110 | 106 | 50-146 | 4 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 79 | 85 | 10-140 | 6 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 85 | 88 | 10-136 | 2 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 106 | 106 | 52-146 | 1 | 30 | | | | |
| 1,1,2-Trichloroethane | 102 | 99 | 58-152 | 4 | 30 | | | | |
| Trichloroethene | 107 | 107 | 53-144 | 1 | 30 | | | | |
| Trichlorofluoromethane | 117 | 117 | 47-163 | 0 | 30 | | | | |
| 1,2,3-Trichloropropane | 98 | 102 | 36-180 | 3 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 106 | 104 | 37-149 | 3 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 105 | 106 | 38-150 | 0 | 30 | | | | |
| Vinyl Acetate | 55 | 64 | 21-139 | 16 | 30 | | | | |
| Vinyl Chloride | 114 | 117 | 50-154 | 1 | 30 | | | | |
| m+p-Xylene | 109 | 106 | 44-137 | 4 | 30 | | | | |
| o-Xylene | 105 | 102 | 42-137 | 4 | 30 | | | | |
| Batch number: 14164162401A | Sample number(s): 7492844,7492846-7492848 | | | | | BKG: 7492844 | | | |
| 14a Moisture Content by 160.3 | | | | | | 3.6 | 3.6 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141612AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7492844 | 113 | 115 | 97 | 97 |
| 7492846 | 108 | 105 | 99 | 92 |
| 7492847 | 109 | 104 | 99 | 93 |
| Blank | 104 | 104 | 100 | 96 |
| LCS | 108 | 113 | 103 | 103 |
| MS | 101 | 100 | 104 | 101 |
| MSD | 102 | 99 | 102 | 99 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141642AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7492848 | 109 | 105 | 97 | 93 |
| Blank | 107 | 108 | 98 | 93 |
| LCS | 105 | 103 | 100 | 104 |
| LCSD | 104 | 103 | 100 | 99 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141621AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480550
Reported: 07/07/14 at 12:15 PM

## Surrogate Quality Control

| | | | | |
|---|---|---|---|---|
| 7492845 | 101 | 98 | 96 | 94 |
| Blank | 100 | 98 | 96 | 95 |
| LCS | 100 | 96 | 97 | 97 |
| LCSD | 101 | 98 | 97 | 98 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

13013 1480550 7492844-48

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/9/2014
CarrierName: FedEx
AirbillNo: 770243934110

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140609-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-611-SA5A-SB-1.35-1.85 | 6/9/14 10:39 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-611-SA5A-SB-1.35-1.85 | 6/9/14 10:39 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| TB-060914 | 6/9/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-527-SA6-SB-2.0-3.0 | 6/9/14 03:25 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-527-SA6-SB-2.0-3.0 | 6/9/14 03:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-574-SA6-SB-3.8-4.3 | 6/9/14 14:48 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-574-SA6-SB-3.8-4.3 | 6/9/14 14:48 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-630-SA5A-SB-1.5-2.0 | 6/9/14 13:54 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-630-SA5A-SB-1.5-2.0 | 6/9/14 13:54 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Andrew Payne Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [signature] | 06/09/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | [signature] | 6-10-14 | 910 |

Soil Vapor 1 of 1

COC Rev 4

COC: 20140609-02, Page 1 of 1

1 of 1

## Nicole Maljovec

**From:** Mysel, Stefanie <MyselSJ@cdmsmith.com>
**Sent:** Wednesday, June 11, 2014 12:19 PM
**To:** Nicole Maljovec
**Cc:** Natalie Luciano; Hartman, Pamela; Burgesser, Todd; Zakowski, Cherie
**Subject:** 1480242-SSFL Phase 3 Sampling-06/07/2014 9:15:00 Acknowledgement
**Attachments:** 1480242c.pdf; 1480242d.pdf; EAcknow_1480242.xls; Lancaster 060914 COC(2)-REV.pdf

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Nicole,

I noticed an error on our COC which was reflected on this log in that needs to be changed. The time for sample SVL-527-SA6-SB-2.0-3.0 says 3:25. The time needs to be changed to 13:25. I have attached are revised relinquished COC for your records.

Stefanie J. Mysel
Geologist

CDM Smith
111 Academy Way
Suite 150
Irvine, CA 92617
Direct: 949-930-9877
Main: 949-752-5452
Cell: 949-579-0634
Email: myselsj@cdmsmith.com<mailto:myselsj@cdmsmith.com>

---

From: USLAN-PXAdmin [USLAN-PXAdmin@lancasterlabs.com]
Sent: Wednesday, June 11, 2014 8:39 AM
To: Burgesser, Todd; Zakowski, Cherie; Hartman, Pamela; Mysel, Stefanie
Subject: 1480242-SSFL Phase 3 Sampling-06/07/2014 9:15:00 Acknowledgement

The following is an acknowledgement of the receipt of samples by Lancaster Laboratories. Please review this acknowledgement and contact your Client Service Representative if you have concerns.

This is an automated message from an unmonitored address. Please do not reply to this address.

# SSFL Phase 3 Chain of Custody

**CDM Smith**

| | | | | | |
|---|---|---|---|---|---|
| DateShipped: | 6/9/2014 | Contact Name: | Pam Hartman | COC No: | 20140609-02 |
| CarrierName: | FedEx | Contact Phone: | (818)466-8007 | Cooler #: | 1 |
| AirbillNo: | 770243934110 | | | Lab: | Lancaster |
| | | | | Lab Phone: | 717-556-7259 |
| | | | | Lab Address | 2425 New Holland Pike<br>Lancaster, PA 17601 |

Revised COC NLM 6/16/14

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVL-611-SA5A-SB-1.35-1.85 | 6/9/14 10:39 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-611-SA5A-SB-1.35-1.85 | 6/9/14 10:39 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| TB-060914 | 6/9/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-527-SA6-SB-2.0-3.0 | 6/9/14 13:25 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-527-SA6-SB-2.0-3.0 | 6/9/14 13:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-574-SA6-SB-3.8-4.3 | 6/9/14 14:48 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-574-SA6-SB-3.8-4.3 | 6/9/14 14:48 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-630-SA5A-SB-1.5-2.0 | 6/9/14 13:54 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-630-SA5A-SB-1.5-2.0 | 6/9/14 13:54 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Andrew Payne Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stef Myself | 06/09/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

COC Rev 4

COC: 20140609-02, Page 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16892

Group Number(s): 1480550

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/10/2014 9:10 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | Yes | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:06 on 06/10/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | 8013596-IR | 0.5 | IR | Wet | Y | Bagged | N | N |

### Container Quantity Discrepancy Details: SSFL

| Sample ID on COC | Container Qty. Received | Container Qty. on COC | Comments |
|---|---|---|---|
| FDG2-SL-858-NBZ-SB-0.0-0.5 | 2 | 3 | Only received 1 sleeve and 1 jar |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.cor

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

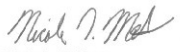
Submittal Date: 06/10/2014
Group Number: 1480552
SDG: PH224
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| FDG2-SL-558-NBZ-SB-0.0-0.5 Soil | 7492863 |
| FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil | 7492864 |
| FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil | 7492865 |
| FDG2-SL-558-NBZ-SB-0.0-0.5DUP Soil | 7492866 |
| FDG2-SL-559-NBZ-SB-0.0-0.5 Soil | 7492867 |
| FDG2-SL-632-NBZ-SB-0.0-0.5 Soil | 7492868 |
| FDG2-SL-858-NBZ-SB-0.0-0.5 Soil | 7492869 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,



Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample #** SW 7492863
**LL Group #** 1480552
**Account #** 13013

**Project Name:** SSFL Phase 3 Sampling

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.76 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 7.3 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 8.2 | J | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.5 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 21 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.7 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.77 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.83 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.4 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.7 | 0.68 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 92 | U | 92 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 20 | U | 20 | 20 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 2,500 | U | 2,500 | 770 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,500 | U | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.76 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.97 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492863**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.0 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 0.99 | J | 1.7 | 0.33 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.6 | J | 1.7 | 0.35 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.83 | U | 0.83 | 0.45 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.83 | U | 0.83 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.33 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.52 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.79 | J | 1.7 | 0.33 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.60 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.83 | U | 0.83 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.7 | U | 6.7 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.35 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 33 | U | 33 | 14 | 1 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.4 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 28 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 47 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 4.1 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| The reverse surrogate, capric acid, is present at <1%. | | | | | | | |
| The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | | |
| A target analyte(s) in the continuing calibration verification | | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492863**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | standard is outside the QC acceptance limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. All results are reported from the second trial per client request. The first trial results are: EFH (C8-C11) non-detect EFH (C12-C14) non-detect EFH (C15-C20) 4.3 mg/kg EFH (C21-C30) 33 mg/kg EFH (C30-C40) 50 mg/kg | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,700 | | 40.8 | 7.35 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.08 | U | 4.08 | 0.754 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.91 | J | 4.08 | 0.714 | 1 |
| 06946 | Barium | 7440-39-3 | 106 | | 1.02 | 0.0336 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.672 | J | 1.02 | 0.0683 | 1 |
| 07914 | Boron | 7440-42-8 | 8.75 | J | 10.2 | 0.856 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.356 | J | 1.02 | 0.0775 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,950 | | 20.4 | 3.40 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.2 | | 3.06 | 0.163 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.60 | | 1.02 | 0.101 | 1 |
| 06953 | Copper | 7440-50-8 | 9.55 | | 2.04 | 0.296 | 1 |
| 01654 | Iron | 7439-89-6 | 21,600 | | 40.8 | 3.69 | 1 |
| 06955 | Lead | 7439-92-1 | 9.97 | | 3.06 | 0.510 | 1 |
| 01656 | Lithium | 7439-93-2 | 33.2 | | 4.1 | 0.35 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,570 | | 10.2 | 1.70 | 1 |
| 06958 | Manganese | 7439-96-5 | 387 | | 1.02 | 0.0846 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.661 | J | 2.04 | 0.173 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.4 | | 2.04 | 0.133 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 421 | | 10.2 | 2.95 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,310 | | 102 | 8.50 | 1 |
| 01667 | Sodium | 7440-23-5 | 80.3 | J | 102 | 17.0 | 1 |
| 06969 | Tin | 7440-31-5 | 2.92 | J | 10.2 | 0.224 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,030 | | 1.02 | 0.173 | 1 |
| 06971 | Vanadium | 7440-62-2 | 36.3 | | 1.02 | 0.133 | 1 |
| 06972 | Zinc | 7440-66-6 | 62.2 | | 4.08 | 0.204 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.98 | J | 5.10 | 0.856 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.351 | J | 0.408 | 0.102 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0524 | J | 0.204 | 0.0265 | 2 |
| 06144 | Strontium | 7440-24-6 | 27.2 | | 0.408 | 0.0693 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.277 | | 0.204 | 0.0306 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0199 | | 0.0164 | 0.0099 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492863**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.5 C. | n.a. | 6.29 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 1.9 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492863**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.00 | U | 1.00 | 0.0762 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 5.00 | U | 5.00 | 0.0585 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.164 | JBQ | 5.00 | 0.0528 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.359 | JB | 5.00 | 0.0549 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.248 | JBQ | 5.00 | 0.0517 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 5.59 | B | 5.00 | 0.0563 | 1 |
| 11031 | OCDD | 3268-87-9 | 50.1 | B | 10.0 | 0.0406 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.192 | JQ | 1.00 | 0.103 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.313 | JB | 5.00 | 0.0428 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.406 | JB | 5.00 | 0.0436 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.213 | JBQ | 5.00 | 0.0489 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.209 | JBQ | 5.00 | 0.0418 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.170 | JB | 5.00 | 0.0546 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.186 | JB | 5.00 | 0.0443 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.05 | JB | 5.00 | 0.0392 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.194 | JB | 5.00 | 0.0620 | 1 |
| 11031 | OCDF | 39001-02-0 | 2.14 | JB | 10.0 | 0.0527 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.287 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 90 | 25 - 181 |
| 13C12-123478-HxCDD | 85 | 32 - 141 |
| 13C12-123678-HxCDD | 87 | 28 - 130 |
| 13C12-123789-HxCDD | 87 | 28 - 130 |
| 13C12-1234678-HpCDD | 82 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 100 | 24 - 185 |
| 13C12-23478-PeCDF | 91 | 21 - 178 |
| 13C12-123478-HxCDF | 80 | 26 - 152 |
| 13C12-123678-HxCDF | 93 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 77 | 29 - 147 |
| 13C12-1234678-HpCDF | 102 | 28 - 143 |
| 13C12-1234789-HpCDF | 70 | 26 - 138 |
| 13C12-OCDF | 64 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492863**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492863**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 08:18 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141620024A | 06/13/2014 05:03 | Lisa A Reinert | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141620028A | 06/16/2014 18:21 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 22:49 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141620028A | 06/12/2014 10:00 | William H Saadeh | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141620024A | 06/12/2014 08:30 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141670004A | 06/18/2014 00:53 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141670005A | 06/19/2014 19:42 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141670005A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141670004A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14163002 | 06/13/2014 19:48 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14163002 | 06/12/2014 12:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492863**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:40 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 07:35 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:35 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:35 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:35 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 08:51 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14161039403A | 06/10/2014 22:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3

**LL Sample # SW 7492864**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 28 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 28 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 37 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 28 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 14 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 42 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 43 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 30 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 31 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 17 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 29 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 29 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 38 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 32 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 17 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 31 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 21 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 39 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 30 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 27 | | 1.7 | 0.68 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 110 | | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 80 | J | 92 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 17 | U | 17 | 6.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 9.0 | J | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 130 | | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 13,000 | | 2,500 | 770 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 8,600 | | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 11 | | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 10 | | 1.7 | 0.76 | 1 |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 2.9 | | 0.85 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 3.0 | | 0.85 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 3.0 | | 1.9 | 0.98 | 1 |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.1 | | 0.85 | 0.17 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3

**LL Sample # SW 7492864**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 6.9 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 7.2 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 8.5 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.3 | | 0.85 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.5 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 3.0 | | 0.85 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.1 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 6.2 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.6 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.0 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 5.7 | | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 3.1 | | 0.85 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 3.0 | | 0.85 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 35 | | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 180 | | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 190 | | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 7.4 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 12 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 45 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 72 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.7 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.9 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 12 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 14 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 2.7 | J | 5.1 | 2.0 | 1 |

The reverse surrogate, capric acid, is present at <1%.
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.
A target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits. The following corrective action was taken:

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3

**LL Sample # SW 7492864**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| | The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. All results are reported from the second trial per client request. The first trial results are: EFH (C8-C11) 5.3 mg/kg; EFH (C12-C14) 7.8 mg/kg; EFH (C15-C20) 14 mg/kg; EFH (C21-C30) 48 mg/kg; EFH (C30-C40) 72 mg/kg | | | | | |
| **Metals** | **SW-846 6010C** | | mg/kg | mg/kg | mg/kg | |
| 01643 | Aluminum | 7429-90-5 | 19,700 | 39.6 | 7.14 | 1 |
| 06944 | Antimony | 7440-36-0 | 18.9 | 3.96 | 0.732 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.7 | 3.96 | 0.693 | 1 |
| 06946 | Barium | 7440-39-3 | 305 | 0.990 | 0.0327 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.76 | 0.990 | 0.0663 | 1 |
| 07914 | Boron | 7440-42-8 | 193 | 9.90 | 0.831 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.07 | 0.990 | 0.0752 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,560 | 19.8 | 3.31 | 1 |
| 06951 | Chromium | 7440-47-3 | 41.4 | 2.97 | 0.158 | 1 |
| 06952 | Cobalt | 7440-48-4 | 53.1 | 0.990 | 0.0980 | 1 |
| 06953 | Copper | 7440-50-8 | 35.7 | 1.98 | 0.287 | 1 |
| 01654 | Iron | 7439-89-6 | 23,900 | 39.6 | 3.58 | 1 |
| 06955 | Lead | 7439-92-1 | 25.9 | 2.97 | 0.495 | 1 |
| 01656 | Lithium | 7439-93-2 | 136 | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,320 | 9.90 | 1.65 | 1 |
| 06958 | Manganese | 7439-96-5 | 452 | 0.990 | 0.0821 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 185 | 1.98 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 63.8 | 1.98 | 0.129 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 505 | 9.90 | 2.86 | 1 |
| 01662 | Potassium | 7440-09-7 | 5,990 | 99.0 | 8.25 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,080 | 99.0 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 348 | 9.90 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,420 | 0.990 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 92.8 | 0.990 | 0.129 | 1 |
| 06972 | Zinc | 7440-66-6 | 115 | 3.96 | 0.198 | 1 |
| 10146 | Zirconium | 7440-67-7 | 92.6 | 4.95 | 0.831 | 1 |
| | **SW-846 6020A** | | mg/kg | mg/kg | mg/kg | |
| 06141 | Selenium | 7782-49-2 | 2.48 | 0.396 | 0.0990 | 2 |
| 06142 | Silver | 7440-22-4 | 11.0 | 0.198 | 0.0257 | 2 |
| 06144 | Strontium | 7440-24-6 | 37.1 | 0.396 | 0.0673 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.747 | 0.198 | 0.0297 | 2 |
| | **SW-846 7471B** | | mg/kg | mg/kg | mg/kg | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.192 | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 1.9 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil
SSFL Phase 3

**LL Sample # SW 7492864**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.1 | | 1.01 | 0.0831 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 101 | B | 5.04 | 0.0920 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 99.8 | B | 5.04 | 0.0659 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 100 | B | 5.04 | 0.0710 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 101 | B | 5.04 | 0.0600 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 101 | B | 5.04 | 0.0578 | 1 |
| 11031 | OCDD | 3268-87-9 | 231 | B | 10.1 | 0.0489 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.1 | | 1.01 | 0.125 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 100 | B | 5.04 | 0.0575 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 99.7 | B | 5.04 | 0.0565 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 100 | B | 5.04 | 0.104 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 101 | B | 5.04 | 0.0909 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 99.0 | B | 5.04 | 0.113 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 102 | B | 5.04 | 0.0970 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 98.8 | B | 5.04 | 0.0508 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 101 | B | 5.04 | 0.0830 | 1 |
| 11031 | OCDF | 39001-02-0 | 200 | B | 10.1 | 0.0579 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 87 | 25 - 164 |
| 13C12-12378-PeCDD | 94 | 25 - 181 |
| 13C12-123478-HxCDD | 90 | 32 - 141 |
| 13C12-123678-HxCDD | 91 | 28 - 130 |
| 13C12-123789-HxCDD | 99 | 28 - 130 |
| 13C12-1234678-HpCDD | 88 | 23 - 140 |
| 13C12-OCDD | 78 | 17 - 157 |
| 13C12-2378-TCDF | 86 | 24 - 169 |
| 13C12-12378-PeCDF | 101 | 24 - 185 |
| 13C12-23478-PeCDF | 97 | 21 - 178 |
| 13C12-123478-HxCDF | 87 | 26 - 152 |
| 13C12-123678-HxCDF | 98 | 26 - 123 |
| 13C12-234678-HxCDF | 90 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 109 | 28 - 143 |
| 13C12-1234789-HpCDF | 74 | 26 - 138 |
| 13C12-OCDF | 66 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3**

**LL Sample # SW 7492864**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MS

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3**

**LL Sample # SW 7492864**
**LL Group # 1480552**
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3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MS

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 09:04 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141620024A | 06/13/2014 05:30 | Lisa A Reinert | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141620028A | 06/16/2014 18:34 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 23:07 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141620028A | 06/12/2014 10:00 | William H Saadeh | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141620024A | 06/12/2014 08:30 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141670004A | 06/18/2014 01:14 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141670005A | 06/19/2014 20:06 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141670005A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141670004A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14163002 | 06/13/2014 22:38 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14163002 | 06/12/2014 12:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5MS Soil**
**SSFL Phase 3**

**LL Sample # SW 7492864**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MS

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:52 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 07:42 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:42 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:42 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:42 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 08:57 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3

**LL Sample # SW 7492865**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 27 | | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 25 | | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 25 | | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 27 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 26 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 34 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 26 | | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 13 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 40 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 36 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 28 | | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 29 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 16 | | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 27 | | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 26 | | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 42 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 29 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 15 | | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 27 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 19 | | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 37 | | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 28 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 25 | | 1.7 | 0.68 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 18 | 1 |
| 10401 | Dalapon | 75-99-0 | 88 | J | 92 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 20 | U | 20 | 20 | 1 |
| 10401 | Dicamba | 1918-00-9 | 8.6 | J | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.2 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.2 | 1 |
| 10401 | MCPA | 94-74-6 | 11,000 | | 2,500 | 770 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 8,600 | | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.84 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.76 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 2.8 | | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 2.9 | | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 2.9 | | 1.9 | 0.98 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3

**LL Sample # SW 7492865**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 3.0 | | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 6.8 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 7.1 | | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 8.6 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 3.1 | | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 6.3 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 2.9 | | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 6.0 | | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 5.9 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin | 72-20-8 | 6.3 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 6.0 | | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 5.3 | | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 2.9 | | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 2.9 | | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 34 | | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 1.7 | U | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 170 | | 17 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 190 | | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 6.9 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 12 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 44 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 77 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.9 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.2 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.0 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 11 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 13 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 2.4 | J | 5.1 | 2.0 | 1 |

The reverse surrogate, capric acid, is present at <1%.
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.
A target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits. The following

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3

**LL Sample # SW 7492865**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| | corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. All results are reported from the second trial per client request. The first trial results are: EFH (C8-C11) 5.5 mg/kg EFH (C12-C14) 7.1 mg/kg EFH (C15-C20) 12 mg/kg EFH (C21-C30) 47 mg/kg EFH (C30-C40) 76 mg/kg | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 17,900 | 39.6 | 7.14 | 1 |
| 06944 | Antimony | 7440-36-0 | 20.8 | 3.96 | 0.732 | 1 |
| 06935 | Arsenic | 7440-38-2 | 19.8 | 3.96 | 0.693 | 1 |
| 06946 | Barium | 7440-39-3 | 301 | 0.990 | 0.0327 | 1 |
| 06947 | Beryllium | 7440-41-7 | 5.76 | 0.990 | 0.0663 | 1 |
| 07914 | Boron | 7440-42-8 | 199 | 9.90 | 0.831 | 1 |
| 06949 | Cadmium | 7440-43-9 | 5.11 | 0.990 | 0.0752 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,680 | 19.8 | 3.31 | 1 |
| 06951 | Chromium | 7440-47-3 | 39.8 | 2.97 | 0.158 | 1 |
| 06952 | Cobalt | 7440-48-4 | 52.9 | 0.990 | 0.0980 | 1 |
| 06953 | Copper | 7440-50-8 | 35.4 | 1.98 | 0.287 | 1 |
| 01654 | Iron | 7439-89-6 | 21,100 | 39.6 | 3.58 | 1 |
| 06955 | Lead | 7439-92-1 | 24.6 | 2.97 | 0.495 | 1 |
| 01656 | Lithium | 7439-93-2 | 133 | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,810 | 9.90 | 1.65 | 1 |
| 06958 | Manganese | 7439-96-5 | 420 | 0.990 | 0.0821 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 188 | 1.98 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 62.9 | 1.98 | 0.129 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 505 | 9.90 | 2.86 | 1 |
| 01662 | Potassium | 7440-09-7 | 5,570 | 99.0 | 8.25 | 1 |
| 01667 | Sodium | 7440-23-5 | 1,070 | 99.0 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 354 | 9.90 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,330 | 0.990 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 89.1 | 0.990 | 0.129 | 1 |
| 06972 | Zinc | 7440-66-6 | 110 | 3.96 | 0.198 | 1 |
| 10146 | Zirconium | 7440-67-7 | 94.2 | 4.95 | 0.831 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 2.60 | 0.396 | 0.0990 | 2 |
| 06142 | Silver | 7440-22-4 | 12.3 | 0.198 | 0.0257 | 2 |
| 06144 | Strontium | 7440-24-6 | 44.4 | 0.396 | 0.0673 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.801 | 0.198 | 0.0297 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.191 | 0.0164 | 0.0098 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 1.9 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3

**LL Sample # SW 7492865**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | ng/kg | | ng/kg | ng/kg | |
| 11031 | 2378-TCDD | 1746-01-6 | 19.7 | | 1.01 | 0.101 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 104 | B | 5.07 | 0.0958 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 101 | B | 5.07 | 0.0717 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 99.7 | B | 5.07 | 0.0738 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 101 | B | 5.07 | 0.0669 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 103 | B | 5.07 | 0.0782 | 1 |
| 11031 | OCDD | 3268-87-9 | 234 | B | 10.1 | 0.0525 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 21.1 | | 1.01 | 0.128 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 100 | B | 5.07 | 0.0656 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 101 | B | 5.07 | 0.0624 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 103 | B | 5.07 | 0.112 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 102 | B | 5.07 | 0.100 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 101 | B | 5.07 | 0.115 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 103 | B | 5.07 | 0.104 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 98.6 | B | 5.07 | 0.0640 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 100 | B | 5.07 | 0.102 | 1 |
| 11031 | OCDF | 39001-02-0 | 203 | B | 10.1 | 0.0599 | 1 |

| **Labeled Compounds** | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 79 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 87 | 32 - 141 |
| 13C12-123678-HxCDD | 89 | 28 - 130 |
| 13C12-123789-HxCDD | 92 | 28 - 130 |
| 13C12-1234678-HpCDD | 87 | 23 - 140 |
| 13C12-OCDD | 80 | 17 - 157 |
| 13C12-2378-TCDF | 81 | 24 - 169 |
| 13C12-12378-PeCDF | 93 | 24 - 185 |
| 13C12-23478-PeCDF | 90 | 21 - 178 |
| 13C12-123478-HxCDF | 86 | 26 - 152 |
| 13C12-123678-HxCDF | 97 | 26 - 123 |
| 13C12-234678-HxCDF | 90 | 28 - 136 |
| 13C12-123789-HxCDF | 87 | 29 - 147 |
| 13C12-1234678-HpCDF | 108 | 28 - 143 |
| 13C12-1234789-HpCDF | 78 | 26 - 138 |
| 13C12-OCDF | 71 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*
*C Confirmed quantitation on secondary GC column*
*Q EMPC - Estimated Maximum Possible Concentration*
*F Interference is present*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3**

**LL Sample # SW 7492865**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|
| S | *Saturation of detection signal* | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil**
**SSFL Phase 3**

**LL Sample # SW 7492865**
**LL Group # 1480552**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MSD

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 09:51 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141620024A | 06/13/2014 05:57 | Lisa A Reinert | 1 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141620028A | 06/16/2014 18:48 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 23:26 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141620028A | 06/12/2014 10:00 | William H Saadeh | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141620024A | 06/12/2014 08:30 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141670004A | 06/18/2014 01:36 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141670005A | 06/19/2014 20:27 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141670005A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141670004A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14163002 | 06/13/2014 23:35 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14163002 | 06/12/2014 12:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5MSD Soil
SSFL Phase 3

**LL Sample # SW 7492865**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:56 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 07:45 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:45 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:45 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:45 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 09:03 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-558-NBZ-SB-0.0-0.5DUP Soil
SSFL Phase 3

**LL Sample # SW 7492866**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01DUP

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 12,300 | | 40.4 | 7.28 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.04 | U | 4.04 | 0.747 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.62 | | 4.04 | 0.706 | 1 |
| 06946 | Barium | 7440-39-3 | 77.3 | | 1.01 | 0.0333 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.569 | J | 1.01 | 0.0676 | 1 |
| 07914 | Boron | 7440-42-8 | 4.26 | J | 10.1 | 0.848 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.181 | J | 1.01 | 0.0767 | 1 |
| 01650 | Calcium | 7440-70-2 | 2,920 | | 20.2 | 3.37 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.8 | | 3.03 | 0.161 | 1 |
| 06952 | Cobalt | 7440-48-4 | 6.65 | | 1.01 | 0.0999 | 1 |
| 06953 | Copper | 7440-50-8 | 8.47 | | 2.02 | 0.293 | 1 |
| 01654 | Iron | 7439-89-6 | 24,300 | | 40.4 | 3.65 | 1 |
| 06955 | Lead | 7439-92-1 | 4.15 | | 3.03 | 0.505 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.3 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,220 | | 10.1 | 1.69 | 1 |
| 06958 | Manganese | 7439-96-5 | 378 | | 1.01 | 0.0838 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.438 | J | 2.02 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 11.2 | | 2.02 | 0.131 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 499 | | 10.1 | 2.92 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,440 | | 101 | 8.42 | 1 |
| 01667 | Sodium | 7440-23-5 | 74.3 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.89 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,120 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 41.1 | | 1.01 | 0.131 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.6 | | 4.04 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 4.09 | J | 5.05 | 0.848 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.335 | J | 0.404 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.202 | U | 0.202 | 0.0262 | 2 |
| 06144 | Strontium | 7440-24-6 | 11.2 | | 0.404 | 0.0686 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.266 | | 0.202 | 0.0303 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0164 | U | 0.0164 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.32 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.6 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 1.9 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 2.0 | | 0.10 | 0.10 | 1 |
| | The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations. | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-558-NBZ-SB-0.0-0.5DUP Soil**
**SSFL Phase 3**

**LL Sample # SW 7492866**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:30 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55800 SDG#: PH224-01DUP

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 04:48 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 07:40 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:40 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:40 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 07:40 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 08:55 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14161039403A | 06/10/2014 22:25 | Luz M Groff | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-559-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492867**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 09:25 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55900 SDG#: PH224-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.2 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.3 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 33 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.0 | J | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 59 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 0.80 | J | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.2 | J | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.7 | U | 1.7 | 0.68 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chrysene | | | | | | |
| **Herbicides** | **SW-846 8151A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10401 | 2,4-D | 94-75-7 | 37 | U | 37 | 12 | 1 |
| 10401 | Dalapon | 75-99-0 | 91 | U | 91 | 45 | 1 |
| 10401 | 2,4-DB | 94-82-6 | 16 | J | 17 | 6.3 | 1 |
| 10401 | Dicamba | 1918-00-9 | 12 | U | 12 | 4.1 | 1 |
| 10401 | Dinoseb | 88-85-7 | 24 | U | 24 | 9.1 | 1 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 17 | U | 17 | 9.1 | 1 |
| 10401 | MCPA | 94-74-6 | 2,500 | U | 2,500 | 770 | 1 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 2,500 | U | 2,500 | 760 | 1 |
| 10401 | 2,4,5-T | 93-76-5 | 1.7 | U | 1.7 | 0.83 | 1 |
| 10401 | 2,4,5-TP | 93-72-1 | 1.7 | U | 1.7 | 0.76 | 1 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-559-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492867**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 09:25 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55900 SDG#: PH224-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 4.4 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 11 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 11,500 | | 40.6 | 7.31 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.06 | U | 4.06 | 0.751 | 1 |
| 06935 | Arsenic | 7440-38-2 | 3.52 | J | 4.06 | 0.710 | 1 |
| 06946 | Barium | 7440-39-3 | 75.1 | | 1.01 | 0.0335 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.504 | J | 1.01 | 0.0680 | 1 |
| 07914 | Boron | 7440-42-8 | 6.92 | J | 10.1 | 0.852 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.220 | J | 1.01 | 0.0771 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,110 | | 20.3 | 3.39 | 1 |
| 06951 | Chromium | 7440-47-3 | 17.1 | | 3.04 | 0.162 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.16 | | 1.01 | 0.100 | 1 |
| 06953 | Copper | 7440-50-8 | 8.15 | | 2.03 | 0.294 | 1 |
| 01654 | Iron | 7439-89-6 | 22,800 | | 40.6 | 3.67 | 1 |
| 06955 | Lead | 7439-92-1 | 5.83 | | 3.04 | 0.507 | 1 |
| 01656 | Lithium | 7439-93-2 | 29.3 | | 4.1 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,750 | | 10.1 | 1.69 | 1 |
| 06958 | Manganese | 7439-96-5 | 312 | | 1.01 | 0.0842 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.287 | J | 2.03 | 0.172 | 1 |
| 06961 | Nickel | 7440-02-0 | 10.4 | | 2.03 | 0.132 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 470 | | 10.1 | 2.93 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,660 | | 101 | 8.46 | 1 |
| 01667 | Sodium | 7440-23-5 | 91.5 | J | 101 | 16.9 | 1 |
| 06969 | Tin | 7440-31-5 | 2.86 | J | 10.1 | 0.223 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,090 | | 1.01 | 0.172 | 1 |
| 06971 | Vanadium | 7440-62-2 | 35.7 | | 1.01 | 0.132 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-559-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492867**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 09:25 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55900 SDG#: PH224-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06972 | Zinc | 7440-66-6 | 56.1 | 4.06 | 0.203 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.45 J | 5.07 | 0.852 | 1 |
| | **SW-846 6020A** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.344 J | 0.406 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0329 J | 0.203 | 0.0264 | 2 |
| 06144 | Strontium | 7440-24-6 | 14.3 | 0.406 | 0.0690 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.248 | 0.203 | 0.0304 | 2 |
| | **SW-846 7471B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0164 U | 0.0164 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.39 | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 22.6 C. | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.4 | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-559-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492867**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 09:25 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55900 SDG#: PH224-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 1.01 | U | 1.01 | 0.0606 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.0817 | JB | 5.05 | 0.0477 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.0786 | JBQ | 5.05 | 0.0386 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.195 | JB | 5.05 | 0.0402 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.180 | JBQ | 5.05 | 0.0366 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 2.77 | JB | 5.05 | 0.0353 | 1 |
| 11031 | OCDD | 3268-87-9 | 24.5 | B | 10.1 | 0.0316 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.0786 | JQ | 1.01 | 0.0712 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.185 | JB | 5.05 | 0.0320 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.178 | JBQ | 5.05 | 0.0309 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.172 | JBQ | 5.05 | 0.0399 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.212 | JB | 5.05 | 0.0356 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.119 | JBQ | 5.05 | 0.0425 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.161 | JBQ | 5.05 | 0.0379 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 0.558 | JB | 5.05 | 0.0269 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.0830 | JB | 5.05 | 0.0410 | 1 |
| 11031 | OCDF | 39001-02-0 | 1.04 | JBQ | 10.1 | 0.0385 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.169 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 83 | 25 - 164 |
| 13C12-12378-PeCDD | 88 | 25 - 181 |
| 13C12-123478-HxCDD | 86 | 32 - 141 |
| 13C12-123678-HxCDD | 89 | 28 - 130 |
| 13C12-123789-HxCDD | 91 | 28 - 130 |
| 13C12-1234678-HpCDD | 83 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 86 | 24 - 169 |
| 13C12-12378-PeCDF | 95 | 24 - 185 |
| 13C12-23478-PeCDF | 91 | 21 - 178 |
| 13C12-123478-HxCDF | 85 | 26 - 152 |
| 13C12-123678-HxCDF | 95 | 26 - 123 |
| 13C12-234678-HxCDF | 89 | 28 - 136 |
| 13C12-123789-HxCDF | 86 | 29 - 147 |
| 13C12-1234678-HpCDF | 102 | 28 - 143 |
| 13C12-1234789-HpCDF | 77 | 26 - 138 |
| 13C12-OCDF | 68 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-559-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492867**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 09:25 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55900 SDG#: PH224-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-559-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492867**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 09:25 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55900 SDG#: PH224-02

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14169SLA026 | 06/24/2014 02:15 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14169SLA026 | 06/19/2014 10:30 | Anna E Stager | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141620024A | 06/13/2014 06:23 | Lisa A Reinert | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/11/2014 23:44 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141620024A | 06/12/2014 08:30 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141670004A | 06/17/2014 19:23 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141670005A | 06/19/2014 20:48 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141670005A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141670004A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14163002 | 06/13/2014 20:45 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14163002 | 06/12/2014 12:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-559-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492867**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 09:25 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55900 SDG#: PH224-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:27 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 08:03 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:03 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:03 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:03 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 09:05 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14161039403A | 06/10/2014 22:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-632-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492868**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 10:50 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63200 SDG#: PH224-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.6 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 41 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 63 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 4.2 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 4.3 | J | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |

The reverse surrogate, capric acid, is present at <1%.
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.
A target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits. The recovery for the sample surrogate(s) is outside the QC acceptance limits. The following corrective action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. All results are reported from the second trial per client request.
The first trial results are:
EFH (C8-C11) non-detect
EFH (C12-C14) non-detect
EFH (C15-C20) 3.5 mg/kg
EFH (C21-C30) 24 mg/kg
EFH (C30-C40) 41 mg/kg

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.9 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141670004A | 06/18/2014 03:46 | Heather E Williams | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-632-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492868**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 10:50 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63200 SDG#: PH224-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141670005A | 06/19/2014 21:10 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141670005A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141670004A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-858-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492869**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:35 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | ug/kg | | ug/kg | ug/kg | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 0.65 | J | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.97 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 3.0 | | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 0.84 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 15 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 32 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 3.1 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 20 | | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 3.4 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.76 | J | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.8 | | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 2.5 | | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 5.9 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 2.8 | | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 3.1 | | 1.7 | 0.68 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: N-Nitrosodimethylamine | | | | | | |
| **Herbicides** | **SW-846 8151A** | | ug/kg | | ug/kg | ug/kg | |
| 10401 | 2,4-D | 94-75-7 | 180 | U | 180 | 61 | 5 |
| 10401 | Dalapon | 75-99-0 | 460 | U | 460 | 220 | 5 |
| 10401 | 2,4-DB | 94-82-6 | 100 | | 87 | 32 | 5 |
| 10401 | Dicamba | 1918-00-9 | 61 | U | 61 | 20 | 5 |
| 10401 | Dinoseb | 88-85-7 | 120 | U | 120 | 46 | 5 |
| | The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method. | | | | | | |
| 10401 | 2,4-DP (Dichlorprop) | 120-36-5 | 87 | U | 87 | 46 | 5 |
| 10401 | MCPA | 94-74-6 | 13,000 | U | 13,000 | 3,900 | 5 |
| 10401 | MCPP (Mecoprop) | 93-65-2 | 13,000 | U | 13,000 | 3,800 | 5 |
| 10401 | 2,4,5-T | 93-76-5 | 8.7 | U | 8.7 | 4.2 | 5 |
| 10401 | 2,4,5-TP | 93-72-1 | 8.7 | U | 8.7 | 3.8 | 5 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8081B** | | ug/kg | | ug/kg | ug/kg | |
| 10590 | Aldrin | 309-00-2 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Alpha BHC | 319-84-6 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Beta BHC | 319-85-7 | 1.9 | U | 1.9 | 0.98 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-858-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492869**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:35 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8081B** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 10590 | Gamma BHC - Lindane | 58-89-9 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Chlordane | 57-74-9 | 17 | U | 17 | 4.1 | 1 |
| 10590 | p,p-DDD | 72-54-8 | 0.58 | J | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDE | 72-55-9 | 1.2 | J | 1.7 | 0.34 | 1 |
| 10590 | p,p-DDT | 50-29-3 | 1.9 | | 1.7 | 0.36 | 1 |
| 10590 | Delta BHC | 319-86-8 | 0.84 | U | 0.84 | 0.46 | 1 |
| 10590 | Dieldrin | 60-57-1 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan I | 959-98-8 | 0.84 | U | 0.84 | 0.22 | 1 |
| 10590 | Endosulfan II | 33213-65-9 | 1.7 | U | 1.7 | 0.34 | 1 |
| 10590 | Endosulfan Sulfate | 1031-07-8 | 1.7 | U | 1.7 | 0.60 | 1 |
| 10590 | Endrin | 72-20-8 | 1.7 | U | 1.7 | 0.53 | 1 |
| 10590 | Endrin Aldehyde | 7421-93-4 | 0.87 | J | 1.7 | 0.34 | 1 |
| 10590 | Endrin Ketone | 53494-70-5 | 1.8 | U | 1.8 | 0.61 | 1 |
| 10590 | Heptachlor | 76-44-8 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Heptachlor Epoxide | 1024-57-3 | 0.84 | U | 0.84 | 0.17 | 1 |
| 10590 | Methoxychlor | 72-43-5 | 6.8 | U | 6.8 | 1.7 | 1 |
| 10590 | Mirex | 2385-85-5 | 0.53 | J | 1.7 | 0.36 | 1 |
| 10590 | Toxaphene | 8001-35-2 | 34 | U | 34 | 14 | 1 |
| | Reporting limits were raised due to interference from the sample matrix. | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.3 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 42 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 66 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.0 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 5.4 | J | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| | A target analyte(s) in the continuing calibration verification | | | | | | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-858-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492869**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:35 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | standard is outside the QC acceptance limits. The following corrective action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. All results are reported from the second trial per client request. The first trial results are: EFH (C8-C11) non-detect EFH (C12-C14) non-detect EFH (C15-C20) 6.7 mg/kg EFH (C21-C30) 50 mg/kg EFH (C30-C40) 73 mg/kg | | | | | | |
| **Metals** | | **SW-846 6010C** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 15,600 | | 39.6 | 7.14 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.96 | U | 3.96 | 0.733 | 1 |
| 06935 | Arsenic | 7440-38-2 | 4.19 | | 3.96 | 0.693 | 1 |
| 06946 | Barium | 7440-39-3 | 111 | | 0.991 | 0.0327 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.674 | J | 0.991 | 0.0664 | 1 |
| 07914 | Boron | 7440-42-8 | 9.83 | J | 9.91 | 0.832 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.382 | J | 0.991 | 0.0753 | 1 |
| 01650 | Calcium | 7440-70-2 | 4,790 | | 19.8 | 3.31 | 1 |
| 06951 | Chromium | 7440-47-3 | 19.5 | | 2.97 | 0.159 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.77 | | 0.991 | 0.0981 | 1 |
| 06953 | Copper | 7440-50-8 | 10.4 | | 1.98 | 0.287 | 1 |
| 01654 | Iron | 7439-89-6 | 22,500 | | 39.6 | 3.59 | 1 |
| 06955 | Lead | 7439-92-1 | 12.5 | | 2.97 | 0.495 | 1 |
| 01656 | Lithium | 7439-93-2 | 34.0 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,760 | | 9.91 | 1.65 | 1 |
| 06958 | Manganese | 7439-96-5 | 403 | | 0.991 | 0.0822 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.453 | J | 1.98 | 0.168 | 1 |
| 06961 | Nickel | 7440-02-0 | 14.8 | | 1.98 | 0.129 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 480 | | 9.91 | 2.86 | 1 |
| 01662 | Potassium | 7440-09-7 | 4,500 | | 99.1 | 8.26 | 1 |
| 01667 | Sodium | 7440-23-5 | 81.5 | J | 99.1 | 16.5 | 1 |
| 06969 | Tin | 7440-31-5 | 2.78 | J | 9.91 | 0.218 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,060 | | 0.991 | 0.168 | 1 |
| 06971 | Vanadium | 7440-62-2 | 37.1 | | 0.991 | 0.129 | 1 |
| 06972 | Zinc | 7440-66-6 | 70.8 | | 3.96 | 0.198 | 1 |
| 10146 | Zirconium | 7440-67-7 | 3.67 | J | 4.95 | 0.832 | 1 |
| | | **SW-846 6020A** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.361 | J | 0.396 | 0.0991 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0691 | J | 0.198 | 0.0258 | 2 |
| 06144 | Strontium | 7440-24-6 | 32.9 | | 0.396 | 0.0674 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.297 | | 0.198 | 0.0297 | 2 |
| | | **SW-846 7471B** | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0280 | | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | | **SW-846 9045D modified** | **Std. Units** | | **Std. Units** | **Std. Units** | |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-858-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492869**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:35 by CN

Submitted: 06/10/2014 09:10
Reported: 07/07/2014 12:17

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.7 C. | n.a. | 6.26 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 2.0 | 0.10 | 0.10 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-858-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3

**LL Sample # SW 7492869**
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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Dioxins/Furans** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | 2378-TCDD | 1746-01-6 | 0.0957 | JQ | 0.984 | 0.0774 | 1 |
| 11031 | 12378-PeCDD | 40321-76-4 | 0.297 | JBQ | 4.92 | 0.0705 | 1 |
| 11031 | 123478-HxCDD | 39227-28-6 | 0.255 | JBQ | 4.92 | 0.0656 | 1 |
| 11031 | 123678-HxCDD | 57653-85-7 | 0.442 | JBQ | 4.92 | 0.0672 | 1 |
| 11031 | 123789-HxCDD | 19408-74-3 | 0.448 | JBQ | 4.92 | 0.0603 | 1 |
| 11031 | 1234678-HpCDD | 35822-46-9 | 8.57 | B | 4.92 | 0.0506 | 1 |
| 11031 | OCDD | 3268-87-9 | 70.2 | B | 9.84 | 0.0353 | 1 |
| 11031 | 2378-TCDF | 51207-31-9 | 0.135 | J | 0.984 | 0.112 | 1 |
| 11031 | 12378-PeCDF | 57117-41-6 | 0.360 | JBQ | 4.92 | 0.0454 | 1 |
| 11031 | 23478-PeCDF | 57117-31-4 | 0.537 | JBQ | 4.92 | 0.0484 | 1 |
| 11031 | 123478-HxCDF | 70648-26-9 | 0.322 | JBQ | 4.92 | 0.0530 | 1 |
| 11031 | 123678-HxCDF | 57117-44-9 | 0.372 | JB | 4.92 | 0.0478 | 1 |
| 11031 | 123789-HxCDF | 72918-21-9 | 0.230 | JB | 4.92 | 0.0562 | 1 |
| 11031 | 234678-HxCDF | 60851-34-5 | 0.347 | JB | 4.92 | 0.0514 | 1 |
| 11031 | 1234678-HpCDF | 67562-39-4 | 1.69 | JB | 4.92 | 0.0335 | 1 |
| 11031 | 1234789-HpCDF | 55673-89-7 | 0.223 | JB | 4.92 | 0.0551 | 1 |
| 11031 | OCDF | 39001-02-0 | 3.67 | JB | 9.84 | 0.0523 | 1 |
| **D/F Toxic Equivalents** | **EPA 1613B October 1994** | | **ng/kg** | | **ng/kg** | **ng/kg** | |
| 11031 | TEQ WHO 2005 - EDLx0.0 | n.a. | 0.235 | | | | 1 |

| Labeled Compounds | %Rec | Windows |
|---|---|---|
| 13C12-2378-TCDD | 82 | 25 - 164 |
| 13C12-12378-PeCDD | 85 | 25 - 181 |
| 13C12-123478-HxCDD | 81 | 32 - 141 |
| 13C12-123678-HxCDD | 86 | 28 - 130 |
| 13C12-123789-HxCDD | 88 | 28 - 130 |
| 13C12-1234678-HpCDD | 79 | 23 - 140 |
| 13C12-OCDD | 76 | 17 - 157 |
| 13C12-2378-TCDF | 83 | 24 - 169 |
| 13C12-12378-PeCDF | 94 | 24 - 185 |
| 13C12-23478-PeCDF | 86 | 21 - 178 |
| 13C12-123478-HxCDF | 81 | 26 - 152 |
| 13C12-123678-HxCDF | 92 | 26 - 123 |
| 13C12-234678-HxCDF | 85 | 28 - 136 |
| 13C12-123789-HxCDF | 83 | 29 - 147 |
| 13C12-1234678-HpCDF | 102 | 28 - 143 |
| 13C12-1234789-HpCDF | 71 | 26 - 138 |
| 13C12-OCDF | 63 | 17 - 157 |

***Dioxins/Furans Data Qualifiers:***

*B Detected in Method Blank*
*U Undetected*
*J Estimated concentration between Estimated Detection Limit and Minimum Level*
*E Exceeds calibration range*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-858-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492869**
**LL Group # 1480552**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:35 by CN

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry MRL* | Dry EDL | Dilution Factor |
|---|---|---|---|---|---|---|

*C* *Confirmed quantitation on secondary GC column*
*Q* *EMPC - Estimated Maximum Possible Concentration*
*F* *Interference is present*
*S* *Saturation of detection signal*

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-858-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492869**
**LL Group # 1480552**
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**Project Name: SSFL Phase 3 Sampling**

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3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/17/2014 16:13 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 10401 | 21a Herbicides by EPA 8151A | SW-846 8151A | 1 | 141620024A | 06/13/2014 21:13 | Lisa A Reinert | 5 |
| 10590 | 20a Pesticides by EPA 8081B | SW-846 8081B | 1 | 141620028A | 06/16/2014 19:02 | Jamie L Brillhart | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141610021A | 06/12/2014 00:03 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141610021A | 06/11/2014 05:20 | Roman Kuropatkin | 1 |
| 10496 | PPL Pest. Microwave Extraction | SW-846 3546 | 1 | 141620028A | 06/12/2014 10:00 | William H Saadeh | 1 |
| 04181 | Herbicide Soil Extraction | SW-846 3550B/SW-846 8151A | 1 | 141620024A | 06/12/2014 08:30 | David S Schrum | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141670004A | 06/18/2014 03:03 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141670005A | 06/19/2014 21:31 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141670005A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141670004A | 06/16/2014 15:15 | Kelli M Barto | 1 |
| 11031 | 23a Dioxin/Furan by EPA 1613B | EPA 1613B October 1994 | 1 | 14163002 | 06/13/2014 21:41 | Joseph D Anderson | 1 |
| 11030 | Dioxins/Furans in Solids - Sox | EPA 1613B October 1994 | 1 | 14163002 | 06/12/2014 12:30 | Ginelle L McQuaid | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-858-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3**

**LL Sample # SW 7492869**
**LL Group # 1480552**
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**Project Name: SSFL Phase 3 Sampling**

Collected: 06/09/2014 08:35 by CN

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CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

85800 SDG#: PH224-04*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06961 | Nickel | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141610637001 | 06/12/2014 05:31 | Tara L Snyder | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141610637001B | 06/12/2014 08:05 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:05 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:05 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141610637001A | 06/12/2014 08:05 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141610638001 | 06/12/2014 09:07 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141610637001 | 06/11/2014 08:51 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141610638001 | 06/11/2014 12:00 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14161039403A | 06/10/2014 22:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14164162401B | 06/13/2014 18:32 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14163SLB026 | Sample number(s): 7492863-7492865,7492869 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 68* | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-119 | | |
| Batch number: 14169SLA026 | Sample number(s): 7492867 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 114* | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 80-119 | | |
| Batch number: 141620024A | Sample number(s): 7492863-7492865,7492867,7492869 | | | | | | | | | |
| 2,4-D | 36 | U | 36. | 12 | ug/kg | 109 | | 68-160 | | |
| Dalapon | 90 | U | 90. | 44 | ug/kg | 84 | | 13-128 | | |
| 2,4-DB | 17 | U | 17. | 6.2 | ug/kg | 109 | | 73-159 | | |
| Dicamba | 12 | U | 12. | 4.0 | ug/kg | 100 | | 64-128 | | |
| Dinoseb | 24 | U | 24. | 9.0 | ug/kg | 15 | | 10-56 | | |
| 2,4-DP (Dichlorprop) | 17 | U | 17. | 9.0 | ug/kg | 132 | | 86-178 | | |
| MCPA | 2,500 U | | 2,500. | 760 | ug/kg | 93 | | 61-123 | | |
| MCPP (Mecoprop) | 2,500 U | | 2,500. | 750 | ug/kg | 91 | | 59-128 | | |
| 2,4,5-T | 1.7 | U | 1.7 | 0.82 | ug/kg | 114 | | 69-157 | | |
| 2,4,5-TP | 1.7 | U | 1.7 | 0.75 | ug/kg | 114 | | 78-146 | | |
| Batch number: 141610021A | Sample number(s): 7492863-7492865,7492867,7492869 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 87 | 89 | 36-106 | 3 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 106 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 110 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141620028A | Sample number(s): 7492863-7492865,7492869 | | | | | | | | | |
| Aldrin | 0.83 | U | 0.83 | 0.17 | ug/kg | 90 | | 60-118 | | |
| Alpha BHC | 0.83 | U | 0.83 | 0.17 | ug/kg | 97 | | 55-135 | | |
| Beta BHC | 1.9 | U | 1.9 | 0.96 | ug/kg | 96 | | 67-129 | | |
| Gamma BHC - Lindane | 0.83 | U | 0.83 | 0.17 | ug/kg | 99 | | 56-138 | | |
| Chlordane | 17 | U | 17. | 4.0 | ug/kg | | | | | |
| p,p-DDD | 1.7 | U | 1.7 | 0.33 | ug/kg | 104 | | 69-141 | | |
| p,p-DDE | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 69-130 | | |
| p,p-DDT | 1.7 | U | 1.7 | 0.35 | ug/kg | 102 | | 64-139 | | |
| Delta BHC | 0.83 | U | 0.83 | 0.45 | ug/kg | 103 | | 59-137 | | |
| Dieldrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 100 | | 68-134 | | |
| Endosulfan I | 0.83 | U | 0.83 | 0.22 | ug/kg | 94 | | 56-128 | | |
| Endosulfan II | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 68-128 | | |
| Endosulfan Sulfate | 1.7 | U | 1.7 | 0.33 | ug/kg | 102 | | 71-132 | | |
| Endrin | 1.7 | U | 1.7 | 0.33 | ug/kg | 97 | | 70-132 | | |
| Endrin Aldehyde | 1.7 | U | 1.7 | 0.33 | ug/kg | 89 | | 61-125 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Endrin Ketone | 1.8 | U | 1.8 | 0.60 | ug/kg | 97 | | 69-126 | | |
| Heptachlor | 0.83 | U | 0.83 | 0.17 | ug/kg | 93 | | 57-130 | | |
| Heptachlor Epoxide | 0.83 | U | 0.83 | 0.17 | ug/kg | 96 | | 69-125 | | |
| Methoxychlor | 6.7 | U | 6.7 | 1.7 | ug/kg | 102 | | 67-136 | | |
| Mirex | 1.7 | U | 1.7 | 0.35 | ug/kg | | | | | |
| Toxaphene | 33 | U | 33. | 14 | ug/kg | | | | | |
| Batch number: 141670004A | Sample number(s): 7492863-7492865,7492867-7492869 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 96 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 94 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 91 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 77 | | 60-115 | | |
| Batch number: 141670005A | Sample number(s): 7492863-7492865,7492867-7492869 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 68* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 71* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 70* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 72 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 52* | | 60-115 | | |
| Batch number: 141610637001 | Sample number(s): 7492863-7492867,7492869 | | | | | | | | | |
| Aluminum | 40.0 | U | 40.0 | 7.21 | mg/kg | 106 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 107 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 111 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 104 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 104 | | 80-120 | | |
| Boron | 10.0 | U | 10.0 | 0.840 | mg/kg | 97 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 106 | | 80-120 | | |
| Calcium | 20.0 | U | 20.0 | 3.34 | mg/kg | 104 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 101 | | 80-120 | | |
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 107 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 105 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 105 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 107 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 104 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 103 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 104 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 110 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 106 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 103 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 102 | | 80-120 | | |
| Tin | 1.54 | J | 10.0 | 0.220 | mg/kg | 103 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 103 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 105 | | 80-120 | | |
| Zinc | 0.790 | J | 4.00 | 0.200 | mg/kg | 105 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 104 | | 80-120 | | |
| Batch number: 141610637001A | Sample number(s): 7492863-7492867,7492869 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 105 | | 80-120 | | |
| Strontium | 0.400 | U | 0.400 | 0.0680 | mg/kg | 105 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 107 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141610637001B | Sample number(s): 7492863-7492867,7492869 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 106 | | 80-120 | | |
| Batch number: 141610638001 | Sample number(s): 7492863-7492867,7492869 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 94 | | 85-120 | | |
| Batch number: 14161039403A | Sample number(s): 7492863,7492866-7492867,7492869 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14164162401B | Sample number(s): 7492863-7492869 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

| Analysis Name | Blank Result | | Blank MRL** | Blank EDL | Report Units | OPR %REC | OPRD %REC | OPR/OPRD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14163002 | Sample number(s): 7492863-7492865,7492867,7492869 | | | | | | | | | |
| 2378-TCDD | 1.00 | U | 1.00 | 0.0740 | ng/kg | 99 | | 67-158 | | |
| 12378-PeCDD | 0.0467 | J | 5.00 | 0.0407 | ng/kg | 99 | | 70-142 | | |
| 123478-HxCDD | 0.0257 | J | 5.00 | 0.0233 | ng/kg | 101 | | 70-164 | | |
| 123678-HxCDD | 0.0407 | J | 5.00 | 0.0241 | ng/kg | 98 | | 76-134 | | |
| 123789-HxCDD | 0.0354 | J | 5.00 | 0.0233 | ng/kg | 100 | | 64-162 | | |
| 1234678-HpCDD | 0.162 | J | 5.00 | 0.0251 | ng/kg | 96 | | 70-140 | | |
| OCDD | 0.275 | J | 10.0 | 0.0276 | ng/kg | 93 | | 78-144 | | |
| 2378-TCDF | 1.00 | U | 1.00 | 0.0783 | ng/kg | 105 | | 75-158 | | |
| 12378-PeCDF | 0.208 | J | 5.00 | 0.0323 | ng/kg | 99 | | 80-134 | | |
| 23478-PeCDF | 0.226 | J | 5.00 | 0.0347 | ng/kg | 100 | | 68-160 | | |
| 123478-HxCDF | 0.120 | J | 5.00 | 0.0453 | ng/kg | 102 | | 72-134 | | |
| 123678-HxCDF | 0.182 | J | 5.00 | 0.0377 | ng/kg | 100 | | 84-130 | | |
| 123789-HxCDF | 0.124 | J | 5.00 | 0.0523 | ng/kg | 100 | | 78-130 | | |
| 234678-HxCDF | 0.176 | J | 5.00 | 0.0405 | ng/kg | 101 | | 70-156 | | |
| 1234678-HpCDF | 0.0880 | J | 5.00 | 0.0101 | ng/kg | 97 | | 82-122 | | |
| 1234789-HpCDF | 0.131 | J | 5.00 | 0.0179 | ng/kg | 99 | | 78-138 | | |
| OCDF | 0.207 | J | 10.0 | 0.0485 | ng/kg | 99 | | 63-170 | | |
| TEQ WHO 2005 - EDLx0.0 | 0.0918 | | | | ng/kg | | | | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14163SLB026 | Sample number(s): 7492863-7492865,7492869 UNSPK: 7492863 | | | | | | | | |
| Acenaphthene | 88 | 80 | 48-127 | 10 | 30 | | | | |
| Acenaphthylene | 82 | 75 | 60-128 | 10 | 30 | | | | |
| Anthracene | 83 | 75 | 52-126 | 11 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | 86 | 79 | 44-143 | 8 | 30 | | | | |
| Benzo(a)pyrene | 82 | 74 | 49-137 | 10 | 30 | | | | |
| Benzo(b)fluoranthene | 105 | 95 | 26-142 | 10 | 30 | | | | |
| Benzo(e)pyrene | 84 | 77 | 63-111 | 9 | 30 | | | | |
| Benzo(g,h,i)perylene | 42 | 38 | 33-141 | 11 | 30 | | | | |
| Benzo(k)fluoranthene | 102 | 97 | 49-144 | 4 | 30 | | | | |
| Butylbenzylphthalate | 101 | 81 | 64-156 | 18 | 30 | | | | |
| Di-n-butylphthalate | 87 | 81 | 52-147 | 7 | 30 | | | | |
| Chrysene | 88 | 80 | 43-141 | 9 | 30 | | | | |
| Dibenz(a,h)anthracene | 51 | 46 | 25-145 | 9 | 30 | | | | |
| Diethylphthalate | 87 | 79 | 66-140 | 9 | 30 | | | | |
| Dimethylphthalate | 86 | 78 | 70-123 | 10 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 51 | 64 | 48-164 | 11 | 30 | | | | |
| Fluoranthene | 89 | 82 | 38-153 | 8 | 30 | | | | |
| Fluorene | 89 | 82 | 57-130 | 9 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 49 | 44 | 26-139 | 10 | 30 | | | | |
| 1-Methylnaphthalene | 85 | 77 | 59-139 | 9 | 30 | | | | |
| 2-Methylnaphthalene | 87 | 79 | 46-147 | 10 | 30 | | | | |
| Naphthalene | 86 | 78 | 52-136 | 9 | 30 | | | | |
| N-Nitrosodimethylamine | 61 | 55 | 39-134 | 10 | 30 | | | | |
| Di-n-octylphthalate | 115 | 109 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 85 | 77 | 50-137 | 10 | 30 | | | | |
| Pyrene | 75 | 69 | 26-143 | 8 | 30 | | | | |
| Batch number: 14169SLA026 | Sample number(s): 7492867 UNSPK: P501188 | | | | | | | | |
| Acenaphthene | 90 | 91 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 90 | 90 | 60-128 | 1 | 30 | | | | |
| Anthracene | 92 | 93 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 98 | 103 | 44-143 | 7 | 30 | | | | |
| Benzo(a)pyrene | 86 | 88 | 49-137 | 3 | 30 | | | | |
| Benzo(b)fluoranthene | 112 | 121 | 26-142 | 8 | 30 | | | | |
| Benzo(e)pyrene | 87 | 89 | 63-111 | 4 | 30 | | | | |
| Benzo(g,h,i)perylene | 47 | 43 | 33-141 | 8 | 30 | | | | |
| Benzo(k)fluoranthene | 96 | 98 | 49-144 | 3 | 30 | | | | |
| Butylbenzylphthalate | 95 | 92 | 64-156 | 3 | 30 | | | | |
| Di-n-butylphthalate | 91 | 91 | 52-147 | 1 | 30 | | | | |
| Chrysene | 94 | 104 | 43-141 | 11 | 30 | | | | |
| Dibenz(a,h)anthracene | 57 | 54 | 25-145 | 5 | 30 | | | | |
| Diethylphthalate | 89 | 90 | 66-140 | 2 | 30 | | | | |
| Dimethylphthalate | 89 | 89 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 96 | 408* | 48-164 | 125* | 30 | | | | |
| Fluoranthene | 103 | 129 | 38-153 | 23 | 30 | | | | |
| Fluorene | 93 | 94 | 57-130 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 54 | 51 | 26-139 | 5 | 30 | | | | |
| 1-Methylnaphthalene | 90 | 91 | 59-139 | 2 | 30 | | | | |
| 2-Methylnaphthalene | 92 | 94 | 46-147 | 4 | 30 | | | | |
| Naphthalene | 88 | 90 | 52-136 | 4 | 30 | | | | |
| N-Nitrosodimethylamine | 86 | 91 | 39-134 | 7 | 30 | | | | |
| Di-n-octylphthalate | 126 | 132 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 92 | 106 | 50-137 | 15 | 30 | | | | |
| Pyrene | 88 | 109 | 26-143 | 23 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141620024A | Sample number(s): 7492863-7492865,7492867,7492869 UNSPK: 7492863 | | | | | | | | |
| 2,4-D | 128 | 0* | 42-143 | 200* | 35 | | | | |
| Dalapon | 37 | 41 | 16-98 | 9 | 50 | | | | |
| 2,4-DB | 0* | 0* | 10-179 | 0 | 50 | | | | |
| Dicamba | 106 | 101 | 47-150 | 5 | 50 | | | | |
| Dinoseb | 0* | 0* | 10-115 | 0 | 35 | | | | |
| 2,4-DP (Dichlorprop) | 151 | 0* | 32-171 | 200* | 50 | | | | |
| MCPA | 156* | 124 | 54-138 | 23 | 50 | | | | |
| MCPP (Mecoprop) | 101 | 101 | 46-138 | 0 | 50 | | | | |
| 2,4,5-T | 134 | 0* | 12-172 | 200* | 35 | | | | |
| 2,4,5-TP | 122 | 0* | 65-156 | 200* | 35 | | | | |
| Batch number: 141610021A | Sample number(s): 7492863-7492865,7492867,7492869 UNSPK: 7492863 | | | | | | | | |
| PCB-1016 | 108 | 101 | 41-135 | 6 | 50 | | | | |
| PCB-1260 | 114 | 110 | 40-134 | 4 | 50 | | | | |
| Batch number: 141620028A | Sample number(s): 7492863-7492865,7492869 UNSPK: 7492863 | | | | | | | | |
| Aldrin | 86 | 83 | 16-126 | 4 | 50 | | | | |
| Alpha BHC | 85 | 82 | 14-140 | 4 | 50 | | | | |
| Beta BHC | 87 | 85 | 42-133 | 3 | 50 | | | | |
| Gamma BHC - Lindane | 88 | 85 | 30-137 | 4 | 50 | | | | |
| p,p-DDD | 94 | 92 | 43-149 | 3 | 50 | | | | |
| p,p-DDE | 91 | 89 | 35-152 | 2 | 50 | | | | |
| p,p-DDT | 95 | 97 | 12-193 | 1 | 50 | | | | |
| Delta BHC | 94 | 91 | 13-153 | 4 | 50 | | | | |
| Dieldrin | 90 | 88 | 41-153 | 3 | 50 | | | | |
| Endosulfan I | 85 | 82 | 26-146 | 4 | 50 | | | | |
| Endosulfan II | 88 | 88 | 34-141 | 1 | 50 | | | | |
| Endosulfan Sulfate | 91 | 87 | 10-181 | 4 | 50 | | | | |
| Endrin | 89 | 85 | 30-152 | 4 | 50 | | | | |
| Endrin Aldehyde | 73 | 74 | 23-138 | 0 | 50 | | | | |
| Endrin Ketone | 82 | 77 | 30-148 | 7 | 50 | | | | |
| Heptachlor | 87 | 83 | 16-152 | 4 | 50 | | | | |
| Heptachlor Epoxide | 87 | 84 | 33-144 | 4 | 50 | | | | |
| Methoxychlor | 96 | 92 | 41-161 | 5 | 50 | | | | |
| Batch number: 141670004A | Sample number(s): 7492863-7492865,7492867-7492869 UNSPK: 7492863 | | | | | | | | |
| EFH (C12-C14) | 146* | 135* | 49-123 | 8 | 20 | | | | |
| EFH (C15-C20) | 118 | 107 | 49-123 | 7 | 20 | | | | |
| EFH (C21-C30) | 137* | 130* | 49-123 | 2 | 20 | | | | |
| EFH (C30-C40) | 163* | 195* | 49-123 | 6 | 20 | | | | |
| EFH (C8-C11) | 91 | 95 | 49-123 | 5 | 20 | | | | |
| Batch number: 141670005A | Sample number(s): 7492863-7492865,7492867-7492869 UNSPK: 7492863 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 100 | 81 | 49-123 | 21* | 20 | | | | |
| EFH C15-C20 w/ SiGel | 77 | 66 | 49-123 | 15 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 60 | 55 | 49-123 | 6 | 20 | | | | |
| EFH C30-C40 w/ SiGel | 89 | 83 | 49-123 | 7 | 20 | | | | |
| EFH C8-C11 w/ SiGel | 52 | 47* | 49-123 | 11 | 20 | | | | |
| Batch number: 141610637001 | Sample number(s): 7492863-7492867,7492869 UNSPK: 7492863 BKG: 7492863 | | | | | | | | |
| Aluminum | 2006 | 1087 | 75-125 | 10 | 20 | 15,400 | 12,100 | 24* | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| | (2) | (2) | | | | | | | |
| Antimony | 38* | 42* | 75-125 | 10 | 20 | 4.00 U | 3.96 U | 0 (1) | 20 |
| Arsenic | 106 | 107 | 75-125 | 1 | 20 | 3.83 J | 4.53 | 17 (1) | 20 |
| Barium | 101 | 99 | 75-125 | 2 | 20 | 104 | 75.9 | 31* | 20 |
| Beryllium | 103 | 103 | 75-125 | 0 | 20 | 0.659 J | 0.558 J | 17 (1) | 20 |
| Boron | 93 | 96 | 75-125 | 3 | 20 | 8.58 J | 4.18 J | 69* (1) | 20 |
| Cadmium | 95 | 96 | 75-125 | 1 | 20 | 0.349 J | 0.177 J | 65* (1) | 20 |
| Calcium | 154 (2) | 186 (2) | 75-125 | 3 | 20 | 3,870 | 2,860 | 30* | 20 |
| Chromium | 112 | 104 | 75-125 | 4 | 20 | 18.8 | 19.5 | 3 | 20 |
| Cobalt | 96 | 96 | 75-125 | 0 | 20 | 5.50 | 6.52 | 17 | 20 |
| Copper | 106 | 105 | 75-125 | 1 | 20 | 9.37 | 8.30 | 12 (1) | 20 |
| Iron | 2333 (2) | -506 (2) | 75-125 | 12 | 20 | 21,200 | 23,900 | 12 | 20 |
| Lead | 107 | 99 | 75-125 | 5 | 20 | 9.79 | 4.07 | 83* (1) | 20 |
| Lithium | 104 | 101 | 75-125 | 2 | 20 | 32.6 | 28.8 | 13 | 20 |
| Magnesium | 379 (2) | 119 (2) | 75-125 | 10 | 20 | 4,480 | 6,100 | 31* | 20 |
| Manganese | 131 (2) | 66 (2) | 75-125 | 7 | 20 | 380 | 371 | 2 | 20 |
| Molybdenum | 93 | 95 | 75-125 | 2 | 20 | 0.648 J | 0.430 J | 41* (1) | 20 |
| Nickel | 100 | 98 | 75-125 | 1 | 20 | 14.2 | 11.0 | 25* | 20 |
| Phosphorus | 86 (2) | 86 (2) | 75-125 | 0 | 20 | 413 | 489 | 17 | 20 |
| Potassium | 170 (2) | 128 (2) | 75-125 | 7 | 20 | 4,230 | 2,390 | 56* | 20 |
| Sodium | 101 | 100 | 75-125 | 0 | 20 | 78.8 J | 72.9 J | 8 (1) | 20 |
| Tin | 87 | 89 | 75-125 | 2 | 20 | 2.87 J | 2.83 J | 1 (1) | 20 |
| Titanium | 395 (2) | 305 (2) | 75-125 | 7 | 20 | 1,010 | 1,100 | 8 | 20 |
| Vanadium | 114 | 107 | 75-125 | 4 | 20 | 35.6 | 40.3 | 12 | 20 |
| Zinc | 107 | 97 | 75-125 | 5 | 20 | 61.0 | 54.5 | 11 | 20 |
| Zirconium | 89 | 91 | 75-125 | 2 | 20 | 3.90 J | 4.02 J | 3 (1) | 20 |
| Batch number: 141610637001A | Sample number(s): 7492863-7492867,7492869 UNSPK: 7492863 BKG: 7492863 | | | | | | | | |
| Silver | 110 | 123 | 75-125 | 11 | 20 | 0.0514 J | 0.198 U | 200* (1) | 20 |
| Strontium | 125 | 217* | 75-125 | 18 | 20 | 26.7 | 11.0 | 83* | 20 |
| Thallium | 119 | 132* | 75-125 | 7 | 20 | 0.272 | 0.261 | 4 (1) | 20 |
| Batch number: 141610637001B | Sample number(s): 7492863-7492867,7492869 UNSPK: 7492863 BKG: 7492863 | | | | | | | | |
| Selenium | 107 | 114 | 75-125 | 5 | 20 | 0.345 J | 0.328 J | 5 (1) | 20 |
| Batch number: 141610638001 | Sample number(s): 7492863-7492867,7492869 UNSPK: 7492863 BKG: 7492863 | | | | | | | | |
| 3a Mercury 7471A | 104 | 105 | 65-135 | 0 | 20 | 0.0195 | 0.0161 U | 200* (1) | 20 |
| Batch number: 14161039403A | Sample number(s): 7492863,7492866-7492867,7492869 BKG: 7492863 | | | | | | | | |
| 15a pH by 9045D | | | | | | 6.29 | 6.32 | 0 | 3 |
| Batch number: 14164162401B | Sample number(s): 7492863-7492869 BKG: 7492863 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 1.9 | 2.0 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 1.9 | 2.0 | 3 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 1.9 | 2.0 | 3 | 20 |
| Batch number: 14163002 | Sample number(s): 7492863-7492865,7492867,7492869 UNSPK: 7492863 | | | | | | | | |
| 2378-TCDD | 95 | 97 | 40-135 | 3 | 20 | | | | |
| 12378-PeCDD | 100 | 102 | 40-135 | 3 | 20 | | | | |
| 123478-HxCDD | 99 | 100 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDD | 99 | 98 | 40-135 | 1 | 20 | | | | |

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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 123789-HxCDD | 100 | 99 | 40-135 | 0 | 20 | | | | |
| 1234678-HpCDD | 95 | 96 | 40-135 | 2 | 20 | | | | |
| OCDD | 90 | 91 | 40-135 | 1 | 20 | | | | |
| 2378-TCDF | 104 | 103 | 40-135 | 0 | 20 | | | | |
| 12378-PeCDF | 99 | 98 | 40-135 | 0 | 20 | | | | |
| 23478-PeCDF | 99 | 99 | 40-135 | 1 | 20 | | | | |
| 123478-HxCDF | 99 | 101 | 40-135 | 2 | 20 | | | | |
| 123678-HxCDF | 100 | 101 | 40-135 | 2 | 20 | | | | |
| 123789-HxCDF | 98 | 99 | 40-135 | 2 | 20 | | | | |
| 234678-HxCDF | 101 | 102 | 40-135 | 1 | 20 | | | | |
| 1234678-HpCDF | 97 | 96 | 40-135 | 0 | 20 | | | | |
| 1234789-HpCDF | 100 | 99 | 40-135 | 1 | 20 | | | | |
| OCDF | 98 | 99 | 40-135 | 1 | 20 | | | | |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14163SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7492863 | 93 | 101 | 87 |
| 7492864 | 90 | 97 | 85 |
| 7492865 | 82 | 91 | 77 |
| 7492869 | 88 | 93 | 83 |
| Blank | 94 | 101 | 87 |
| LCS | 100 | 106 | 92 |
| MS | 90 | 97 | 85 |
| MSD | 82 | 91 | 77 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14169SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7492867 | 102 | 106 | 76 |
| Blank | 103 | 107 | 90 |
| LCS | 104 | 109 | 94 |
| MS | 100 | 100 | 86 |
| MSD | 93 | 94 | 83 |
| Limits: | 59-115 | 61-118 | 70-127 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

## Surrogate Quality Control

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141610021A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7492863 | 105 | 101 |
| 7492864 | 114 | 109 |
| 7492865 | 107 | 104 |
| 7492867 | 103 | 104 |
| 7492869 | 108 | 108 |
| Blank | 111 | 109 |
| LCS | 113 | 107 |
| LCSD | 118 | 111 |
| MS | 114 | 109 |
| MSD | 107 | 104 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 21a Herbicides by EPA 8151A
Batch number: 141620024A

| | 2,4-Dichlorophenylacetic acid |
|---|---|
| 7492863 | 92 |
| 7492864 | 100 |
| 7492865 | 93 |
| 7492867 | 77 |
| 7492869 | 80 |
| Blank | 80 |
| LCS | 93 |
| MS | 100 |
| MSD | 93 |
| Limits: | 50-150 |

Analysis Name: 20a Pesticides by EPA 8081B
Batch number: 141620028A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7492863 | 91 | 109 |
| 7492864 | 92 | 103 |
| 7492865 | 87 | 100 |
| 7492869 | 85 | 93 |
| Blank | 95 | 104 |
| LCS | 94 | 109 |
| MS | 92 | 103 |
| MSD | 87 | 100 |
| Limits: | 50-130 | 20-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141670004A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7492863 | 79 | 83 |
| 7492864 | 76 | 97 |
| 7492865 | 74 | 95 |

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7492867 | 72 | 73 |
| 7492868 | 84 | 89 |
| 7492869 | 82 | 85 |
| Blank | 97 | 101 |
| LCS | 74 | 96 |
| MS | 76 | 97 |
| MSD | 74 | 95 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141670005A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7492863 | 52 | 65* |
| 7492864 | 59 | 69 |
| 7492865 | 52 | 61* |
| 7492867 | 62 | 73 |
| 7492868 | 53 | 63* |
| 7492869 | 51 | 61* |
| Blank | 57 | 66 |
| LCS | 57 | 68 |
| MS | 59 | 69 |
| MSD | 52 | 61* |
| Limits: | 37-125 | 66-123 |

Analysis Name: 23a Dioxin/Furan by EPA 1613B
Batch number: 14163002

| | 13C12-2378-TCDD | 13C12-12378-PeCDD | 13C12-123478-HxCDD | 13C12-123678-HxCDD | 13C12-123789-HxCDD | 13C12-1234678-HpCDD |
|---|---|---|---|---|---|---|
| 7492863 | 82 | 90 | 85 | 87 | 87 | 82 |
| 7492864 | 87 | 94 | 90 | 91 | 99 | 88 |
| 7492865 | 79 | 85 | 87 | 89 | 92 | 87 |
| 7492867 | 83 | 88 | 86 | 89 | 91 | 83 |
| 7492869 | 82 | 85 | 81 | 86 | 88 | 79 |
| Blank | 85 | 92 | 94 | 96 | 95 | 88 |
| MS | 87 | 94 | 90 | 91 | 99 | 88 |
| MSD | 79 | 85 | 87 | 89 | 92 | 87 |
| OPR | 87 | 93 | 89 | 90 | 91 | 81 |
| Limits: | 25-164 | 25-181 | 32-141 | 28-130 | 28-130 | 23-140 |

| | 13C12-OCDD | 13C12-2378-TCDF | 13C12-12378-PeCDF | 13C12-23478-PeCDF | 13C12-123478-HxCDF | 13C12-123678-HxCDF |
|---|---|---|---|---|---|---|
| 7492863 | 76 | 83 | 100 | 91 | 80 | 93 |
| 7492864 | 78 | 86 | 101 | 97 | 87 | 98 |
| 7492865 | 80 | 81 | 93 | 90 | 86 | 97 |
| 7492867 | 76 | 86 | 95 | 91 | 85 | 95 |
| 7492869 | 76 | 83 | 94 | 86 | 81 | 92 |
| Blank | 82 | 83 | 102 | 92 | 86 | 103 |
| MS | 78 | 86 | 101 | 97 | 87 | 98 |
| MSD | 80 | 81 | 93 | 90 | 86 | 97 |
| OPR | 67 | 85 | 99 | 92 | 83 | 95 |
| Limits: | 17-157 | 24-169 | 24-185 | 21-178 | 26-152 | 26-123 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ / MRL.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480552
Reported: 07/07/14 at 12:17 PM

## Surrogate Quality Control

| | 13C12-234678-HxCDF | 13C12-123789-HxCDF | 13C12-1234678-HpCDF | 13C12-1234789-HpCDF | 13C12-OCDF |
|---|---|---|---|---|---|
| 7492863 | 85 | 77 | 102 | 70 | 64 |
| 7492864 | 90 | 87 | 109 | 74 | 66 |
| 7492865 | 90 | 87 | 108 | 78 | 71 |
| 7492867 | 89 | 86 | 102 | 77 | 68 |
| 7492869 | 85 | 83 | 102 | 71 | 63 |
| Blank | 92 | 83 | 114 | 75 | 66 |
| MS | 90 | 87 | 109 | 74 | 66 |
| MSD | 90 | 87 | 108 | 78 | 71 |
| OPR | 89 | 84 | 103 | 69 | 56 |
| Limits: | 28-136 | 29-147 | 28-143 | 26-138 | 17-157 |

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(2) The unspiked result was more than four times the spike added.

13013 1480552 7492863-69

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/9/2014
CarrierName: FedEx
AirbillNo: 770243934110

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140609-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate 314.0/331 | Perchlorate Confirm 6850/6860 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FDG2-SL-558-NBZ-SB-0.0-0.5MS | 6/9/14 08:30 | SO | None | 6 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | X | X | | | X | | | | | | | | | | | | | | | | MS/MSD |
| FDG2-SL-558-NBZ-SB-0.0-0.5MS | 6/9/14 08:30 | SO | None | 2 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | MS/MSD |
| FDG2-SL-559-NBZ-SB-0.0-0.5 | 6/9/14 09:25 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | X | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-559-NBZ-SB-0.0-0.5 | 6/9/14 09:25 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-632-SA8-SB-0.0-0.5 | 6/9/14 10:50 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-858-NBZ-SB-0.0-0.5 | 6/9/14 08:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | X | X | | | | | | X | X | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-858-NBZ-SB-0.0-0.5 | 6/9/14 08:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions: For all EFH, silica gel cleanup required on half the extract. Analyze both extracts for EFH.

**Sampler:** Craig Nochajski

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Craig Nochajski | 06/14 | 1000 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | 6.10.14 | 910 | |

Final Data Gap Block 2 1 of 1

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/10/2014 9:10 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 3 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | Yes | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 10:06 on 06/10/2014

### Samples Chilled Details: SSFL

*Thermometer Types:* *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | 8013596-IR | 0.5 | IR | Wet | Y | Bagged | N | N |

### Container Quantity Discrepancy Details: SSFL

| Sample ID on COC | Container Qty. Received | Container Qty. on COC | Comments |
|---|---|---|---|
| FDG2-SL-858-NBZ-SB-0.0-0.5 | 2 | 3 | Only received 1 sleeve and 1 jar |



2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.cor

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/11/2014
Group Number: 1480924
SDG: PH226
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB2-061014 Water | 7494355 |
| SVL-551-SA6-SB-4.0-5.0 Soil | 7494356 |
| SVL-562-SA5B-SB-8.0-9.0 Soil | 7494357 |
| SVL-549-SA5C-SB-6.3-6.8 Soil | 7494358 |
| SVL-561-SA5C-SB-10.5-11.0 Soil | 7494359 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB2-061014 Water**
**SSFL Phase 3 Subarea 6**

**LL Sample # WW 7494355**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:00

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB261 SDG#: PH226-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 20 | U | 20 | 6 | 1 |
| 10335 | Acrolein | 107-02-8 | 100 | U | 100 | 40 | 1 |
| 10335 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 1 |
| 10335 | t-Amyl methyl ether | 994-05-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Benzene | 71-43-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Bromoform | 75-25-2 | 4 | U | 4 | 0.5 | 1 |
| 10335 | Bromomethane | 74-83-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 10 | U | 10 | 3 | 1 |
| 10335 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 5 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Chloroethane | 75-00-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 1 |
| | 2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample. | | | | | | |
| 10335 | Chloroform | 67-66-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 1 |
| 10335 | Chloromethane | 74-87-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 1 |
| 10335 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethyl t-butyl ether | 637-92-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Freon 113 | 76-13-1 | 10 | U | 10 | 2 | 1 |
| 10335 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: TB2-061014 Water**
**SSFL Phase 3 Subarea 6**

**LL Sample # WW 7494355**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:00

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB261 SDG#: PH226-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | | ug/l | ug/l | |
| 10335 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 1 |
| 10335 | di-Isopropyl ether | 108-20-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 1 |
| 10335 | Methyl Iodide | 74-88-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 3 | U | 3 | 2 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Toluene | 108-88-3 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 1 | U | 1 | 0.5 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 1 |
| 10335 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 1 | U | 1 | 0.5 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 1 | U | 1 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 1 | U | 1 | 0.5 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10335 | 12b Volatile Organics EPA8260B | SW-846 8260B | 1 | Y141701AA | 06/19/2014 11:15 | Sarah A Guill | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y141701AA | 06/19/2014 11:15 | Sarah A Guill | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-551-SA6-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7494356**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:45 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55104 SDG#: PH226-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 20 | U | 20 | 7 | 0.91 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 20 | 0.91 |
| 10237 | Acrylonitrile | 107-13-1 | 20 | U | 20 | 4 | 0.91 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.91 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.91 |
| 10237 | t-Butyl alcohol | 75-65-0 | 50 | U | 50 | 20 | 0.91 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.91 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.91 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.91 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.91 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-551-SA6-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7494356**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:45 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55104 SDG#: PH226-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.91 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.91 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.91 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.91 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.91 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.91 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.91 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.91 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.91 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.91 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.91 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 9.3 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141751AA | 06/24/2014 21:21 | Sara E Johnson | 0.91 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:36 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-551-SA6-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 6**

**LL Sample # SW 7494356**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:45 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

55104 SDG#: PH226-02

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416234774 | 06/11/2014 15:36 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:30 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-562-SA5B-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7494357**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 14:45 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56280 SDG#: PH226-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 21 | U | 21 | 7 | 0.98 |
| 10237 | Acrolein | 107-02-8 | 100 | U | 100 | 21 | 0.98 |
| 10237 | Acrylonitrile | 107-13-1 | 21 | U | 21 | 4 | 0.98 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Butanone | 78-93-3 | 10 | U | 10 | 4 | 0.98 |
| 10237 | t-Butyl alcohol | 75-65-0 | 52 | U | 52 | 21 | 0.98 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.98 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 2-Hexanone | 591-78-6 | 10 | U | 10 | 3 | 0.98 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-562-SA5B-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7494357**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 14:45 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56280 SDG#: PH226-03

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.98 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.98 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 10 | U | 10 | 3 | 0.98 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.98 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.98 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 1 | 0.98 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 1 | 0.98 |
| 10237 | Vinyl Acetate | 108-05-4 | 10 | U | 10 | 2 | 0.98 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 1 | 0.98 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 1 | 0.98 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 1 | 0.98 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 6.6 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141642AA | 06/14/2014 06:02 | Stephanie A Selis | 0.98 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:36 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-562-SA5B-SB-8.0-9.0 Soil**
**SSFL Phase 3 Subarea 5B**

**LL Sample # SW 7494357**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 14:45 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56280 SDG#: PH226-03

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416234774 | 06/11/2014 15:36 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:32 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-549-SA5C-SB-6.3-6.8 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7494358**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 14:23 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54963 SDG#: PH226-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 18 | U | 18 | 6 | 0.79 |
| 10237 | Acrolein | 107-02-8 | 91 | U | 91 | 18 | 0.79 |
| 10237 | Acrylonitrile | 107-13-1 | 18 | U | 18 | 4 | 0.79 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.79 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.79 |
| 10237 | t-Butyl alcohol | 75-65-0 | 45 | U | 45 | 18 | 0.79 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.79 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.79 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.79 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.79 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.79 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-549-SA5C-SB-6.3-6.8 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7494358**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 14:23 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54963 SDG#: PH226-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.79 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.79 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.79 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.79 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.79 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.79 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.5 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141642AA | 06/14/2014 06:24 | Stephanie A Selis | 0.79 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:37 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-549-SA5C-SB-6.3-6.8 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7494358**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 14:23 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

54963 SDG#: PH226-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416234774 | 06/11/2014 15:37 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:33 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-561-SA5C-SB-10.5-11.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7494359**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 13:24 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56110 SDG#: PH226-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | Acetone | 67-64-1 | 18 | U | 18 | 6 | 0.79 |
| 10237 | Acrolein | 107-02-8 | 90 | U | 90 | 18 | 0.79 |
| 10237 | Acrylonitrile | 107-13-1 | 18 | U | 18 | 4 | 0.79 |
| 10237 | t-Amyl methyl ether | 994-05-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Benzene | 71-43-2 | 5 | U | 5 | 0.5 | 0.79 |
| 10237 | Bromobenzene | 108-86-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromochloromethane | 74-97-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromodichloromethane | 75-27-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromoform | 75-25-2 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Bromomethane | 74-83-9 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Butanone | 78-93-3 | 9 | U | 9 | 4 | 0.79 |
| 10237 | t-Butyl alcohol | 75-65-0 | 45 | U | 45 | 18 | 0.79 |
| 10237 | n-Butylbenzene | 104-51-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | sec-Butylbenzene | 135-98-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | tert-Butylbenzene | 98-06-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Carbon Disulfide | 75-15-0 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Carbon Tetrachloride | 56-23-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chlorobenzene | 108-90-7 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chloroethane | 75-00-3 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Chloroethyl Vinyl Ether | 110-75-8 | 9 | U | 9 | 2 | 0.79 |
| 10237 | Chloroform | 67-66-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1-Chlorohexane | 544-10-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chloromethane | 74-87-3 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Chlorotoluene | 95-49-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 4-Chlorotoluene | 106-43-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Chlorotrifluoroethene | 79-38-9 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 5 | U | 5 | 2 | 0.79 |
| 10237 | Dibromochloromethane | 124-48-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dibromoethane | 106-93-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Dibromomethane | 74-95-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dichlorobenzene | 95-50-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,3-Dichlorobenzene | 541-73-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,4-Dichlorobenzene | 106-46-7 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Dichlorodifluoromethane | 75-71-8 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 1,1-Dichloroethane | 75-34-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dichloroethane | 107-06-2 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1-Dichloroethene | 75-35-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | cis-1,2-Dichloroethene | 156-59-2 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | trans-1,2-Dichloroethene | 156-60-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2-Dichloropropane | 78-87-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,3-Dichloropropane | 142-28-9 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 2,2-Dichloropropane | 594-20-7 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1-Dichloropropene | 563-58-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | cis-1,3-Dichloropropene | 10061-01-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | trans-1,3-Dichloropropene | 10061-02-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Ethyl t-butyl ether | 637-92-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Ethylbenzene | 100-41-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Freon 113 | 76-13-1 | 5 | U | 5 | 2 | 0.79 |
| 10237 | Freon 133a | 75-88-7 | 5 | U | 5 | 2 | 0.79 |
| 10237 | Hexachlorobutadiene | 87-68-3 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 2-Hexanone | 591-78-6 | 9 | U | 9 | 3 | 0.79 |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-561-SA5C-SB-10.5-11.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7494359**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 13:24 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56110 SDG#: PH226-05*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/kg | | ug/kg | ug/kg | |
| 10237 | di-Isopropyl ether | 108-20-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Isopropylbenzene | 98-82-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | p-Isopropyltoluene | 99-87-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Methyl Iodide | 74-88-4 | 5 | U | 5 | 3 | 0.79 |
| 10237 | Methyl Tertiary Butyl Ether | 1634-04-4 | 5 | U | 5 | 0.5 | 0.79 |
| 10237 | 4-Methyl-2-pentanone | 108-10-1 | 9 | U | 9 | 3 | 0.79 |
| 10237 | Methylene Chloride | 75-09-2 | 5 | U | 5 | 2 | 0.79 |
| 10237 | n-Propylbenzene | 103-65-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Styrene | 100-42-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Tetrachloroethene | 127-18-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Toluene | 108-88-3 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2,3-Trichlorobenzene | 87-61-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2,4-Trichlorobenzene | 120-82-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,1-Trichloroethane | 71-55-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,1,2-Trichloroethane | 79-00-5 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Trichloroethene | 79-01-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Trichlorofluoromethane | 75-69-4 | 5 | U | 5 | 2 | 0.79 |
| 10237 | 1,2,3-Trichloropropane | 96-18-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,2,4-Trimethylbenzene | 95-63-6 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | 1,3,5-Trimethylbenzene | 108-67-8 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | Vinyl Acetate | 108-05-4 | 9 | U | 9 | 2 | 0.79 |
| 10237 | Vinyl Chloride | 75-01-4 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | m+p-Xylene | 179601-23-1 | 5 | U | 5 | 0.9 | 0.79 |
| 10237 | o-Xylene | 95-47-6 | 5 | U | 5 | 0.9 | 0.79 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | | % | % | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 12.1 | | 0.10 | 0.10 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10237 | 12a Volatile Organics EPA8260B | SW-846 8260B | 1 | B141642AA | 06/14/2014 06:46 | Stephanie A Selis | 0.79 |
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:37 | Mitchell R Washel | n.a. |

*=This limit was used in the evaluation of the final result

**Sample Description: SVL-561-SA5C-SB-10.5-11.0 Soil**
**SSFL Phase 3 Subarea 5C**

**LL Sample # SW 7494359**
**LL Group # 1480924**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 13:24 by AP

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:18

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56110 SDG#: PH226-05*

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 07320 | GC/MS - LL DIH2O Encore Prep | SW-846 5035A | 2 | 201416234774 | 06/11/2014 15:37 | Mitchell R Washel | n.a. |
| 07578 | GC/MS-HL Encore Prep-NC | SW-846 5035A | 1 | 201416234774 | 06/11/2014 15:36 | Mitchell R Washel | n.a. |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401A | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141642AA | Sample number(s): 7494357-7494359 | | | | | | | | |
| Acetone | 20 U | 20. | 7 | ug/kg | 114 | 103 | 41-149 | 10 | 30 |
| Acrolein | 100 U | 100. | 20 | ug/kg | 84 | 78 | 50-137 | 8 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/kg | 90 | 98 | 58-123 | 9 | 30 |
| t-Amyl methyl ether | 5 U | 5. | 1 | ug/kg | 94 | 99 | 63-130 | 5 | 30 |
| Benzene | 5 U | 5. | 0.5 | ug/kg | 102 | 103 | 80-120 | 1 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/kg | 107 | 101 | 78-120 | 6 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/kg | 107 | 108 | 75-129 | 1 | 30 |
| Bromodichloromethane | 5 U | 5. | 1 | ug/kg | 100 | 102 | 75-120 | 2 | 30 |
| Bromoform | 5 U | 5. | 1 | ug/kg | 103 | 108 | 70-126 | 5 | 30 |
| Bromomethane | 5 U | 5. | 2 | ug/kg | 111 | 105 | 32-162 | 5 | 30 |
| 2-Butanone | 10 U | 10. | 4 | ug/kg | 84 | 89 | 47-136 | 6 | 30 |
| t-Butyl alcohol | 50 U | 50. | 20 | ug/kg | 105 | 106 | 66-133 | 1 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/kg | 102 | 95 | 72-120 | 8 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/kg | 99 | 92 | 69-120 | 7 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/kg | 105 | 95 | 75-120 | 9 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/kg | 104 | 99 | 63-128 | 4 | 30 |
| Carbon Tetrachloride | 5 U | 5. | 1 | ug/kg | 109 | 109 | 69-130 | 0 | 30 |
| Chlorobenzene | 5 U | 5. | 1 | ug/kg | 106 | 106 | 80-120 | 0 | 30 |
| Chloroethane | 5 U | 5. | 2 | ug/kg | 101 | 99 | 17-171 | 2 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/kg | 73 | 80 | 52-134 | 8 | 30 |
| Chloroform | 5 U | 5. | 1 | ug/kg | 108 | 108 | 80-120 | 0 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/kg | 73 | 72 | 70-130 | 2 | 30 |
| Chloromethane | 5 U | 5. | 2 | ug/kg | 98 | 101 | 56-120 | 3 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 103 | 99 | 78-120 | 4 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/kg | 107 | 102 | 79-120 | 5 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/kg | 70 | 68 | 22-131 | 3 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/kg | 94 | 94 | 50-132 | 0 | 30 |
| Dibromochloromethane | 5 U | 5. | 1 | ug/kg | 105 | 108 | 77-120 | 2 | 30 |
| 1,2-Dibromoethane | 5 U | 5. | 1 | ug/kg | 102 | 107 | 80-120 | 5 | 30 |
| Dibromomethane | 5 U | 5. | 1 | ug/kg | 98 | 103 | 75-120 | 5 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 109 | 101 | 80-120 | 8 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 109 | 103 | 80-120 | 6 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/kg | 107 | 101 | 80-120 | 6 | 30 |
| Dichlorodifluoromethane | 5 U | 5. | 2 | ug/kg | 105 | 100 | 26-137 | 4 | 30 |
| 1,1-Dichloroethane | 5 U | 5. | 1 | ug/kg | 99 | 100 | 71-122 | 1 | 30 |
| 1,2-Dichloroethane | 5 U | 5. | 1 | ug/kg | 108 | 108 | 66-136 | 0 | 30 |
| 1,1-Dichloroethene | 5 U | 5. | 1 | ug/kg | 116 | 117 | 73-129 | 1 | 30 |
| cis-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 105 | 105 | 80-120 | 1 | 30 |
| trans-1,2-Dichloroethene | 5 U | 5. | 1 | ug/kg | 117 | 117 | 79-120 | 0 | 30 |
| 1,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 96 | 97 | 77-120 | 1 | 30 |
| 1,3-Dichloropropane | 5 U | 5. | 1 | ug/kg | 95 | 100 | 73-120 | 4 | 30 |
| 2,2-Dichloropropane | 5 U | 5. | 1 | ug/kg | 104 | 105 | 72-123 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 106 | 107 | 77-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 99 | 74-120 | 3 | 30 |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 96 | 100 | 69-120 | 4 | 30 |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 93 | 98 | 59-134 | 5 | 30 |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 105 | 104 | 80-120 | 1 | 30 |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 106 | 102 | 64-137 | 3 | 30 |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 111 | 106 | 78-120 | 5 | 30 |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 110 | 104 | 46-130 | 6 | 30 |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 83 | 90 | 40-129 | 8 | 30 |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 94 | 97 | 68-128 | 2 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | 105 | 76-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 103 | 95 | 69-120 | 8 | 30 |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 121 | 117 | 72-130 | 3 | 30 |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 103 | 106 | 69-126 | 3 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 84 | 93 | 43-133 | 10 | 30 |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 119 | 116 | 80-124 | 2 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 103 | 97 | 77-120 | 7 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/kg | 106 | 107 | 76-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 110 | 109 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 95 | 90 | 71-123 | 5 | 30 |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 107 | 109 | 78-120 | 1 | 30 |
| Toluene | 5 | U | 5. | 1 | ug/kg | 102 | 103 | 80-120 | 1 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 104 | 102 | 64-120 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | 102 | 68-120 | 4 | 30 |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 98 | 98 | 63-135 | 0 | 30 |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 103 | 104 | 80-120 | 1 | 30 |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 106 | 107 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 107 | 105 | 58-133 | 2 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 104 | 98 | 71-123 | 5 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 107 | 98 | 79-120 | 9 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 106 | 99 | 78-120 | 7 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 103 | 102 | 40-127 | 1 | 30 |
| Vinyl Chloride | 5 | U | 5. | 1 | ug/kg | 106 | 103 | 59-120 | 3 | 30 |
| m+p-Xylene | 5 | U | 5. | 1 | ug/kg | 105 | 106 | 80-120 | 1 | 30 |
| o-Xylene | 5 | U | 5. | 1 | ug/kg | 104 | 105 | 80-120 | 1 | 30 |
| Batch number: B141751AA | Sample number(s): 7494356 | | | | | | | | | |
| Acetone | 20 | U | 20. | 7 | ug/kg | 95 | | 41-149 | | |
| Acrolein | 100 U | | 100. | 20 | ug/kg | 88 | | 50-137 | | |
| Acrylonitrile | 20 | U | 20. | 4 | ug/kg | 97 | | 58-123 | | |
| t-Amyl methyl ether | 5 | U | 5. | 1 | ug/kg | 103 | | 63-130 | | |
| Benzene | 5 | U | 5. | 0.5 | ug/kg | 106 | | 80-120 | | |
| Bromobenzene | 5 | U | 5. | 1 | ug/kg | 108 | | 78-120 | | |
| Bromochloromethane | 5 | U | 5. | 1 | ug/kg | 99 | | 75-129 | | |
| Bromodichloromethane | 5 | U | 5. | 1 | ug/kg | 101 | | 75-120 | | |
| Bromoform | 5 | U | 5. | 1 | ug/kg | 97 | | 70-126 | | |
| Bromomethane | 5 | U | 5. | 2 | ug/kg | 57 | | 32-162 | | |
| 2-Butanone | 10 | U | 10. | 4 | ug/kg | 94 | | 47-136 | | |
| t-Butyl alcohol | 50 | U | 50. | 20 | ug/kg | 100 | | 66-133 | | |
| n-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 111 | | 72-120 | | |
| sec-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 112 | | 69-120 | | |
| tert-Butylbenzene | 5 | U | 5. | 1 | ug/kg | 110 | | 75-120 | | |
| Carbon Disulfide | 5 | U | 5. | 1 | ug/kg | 81 | | 63-128 | | |
| Carbon Tetrachloride | 5 | U | 5. | 1 | ug/kg | 106 | | 69-130 | | |
| Chlorobenzene | 5 | U | 5. | 1 | ug/kg | 109 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 5 | U | 5. | 2 | ug/kg | 53 | | 17-171 | | |
| 2-Chloroethyl Vinyl Ether | 10 | U | 10. | 2 | ug/kg | 102 | | 52-134 | | |
| Chloroform | 5 | U | 5. | 1 | ug/kg | 108 | | 80-120 | | |
| 1-Chlorohexane | 5 | U | 5. | 1 | ug/kg | 101 | | 70-130 | | |
| Chloromethane | 5 | U | 5. | 2 | ug/kg | 86 | | 56-120 | | |
| 2-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 108 | | 78-120 | | |
| 4-Chlorotoluene | 5 | U | 5. | 1 | ug/kg | 112 | | 79-120 | | |
| Chlorotrifluoroethene | 5 | U | 5. | 2 | ug/kg | 98 | | 22-131 | | |
| 1,2-Dibromo-3-chloropropane | 5 | U | 5. | 2 | ug/kg | 101 | | 50-132 | | |
| Dibromochloromethane | 5 | U | 5. | 1 | ug/kg | 103 | | 77-120 | | |
| 1,2-Dibromoethane | 5 | U | 5. | 1 | ug/kg | 107 | | 80-120 | | |
| Dibromomethane | 5 | U | 5. | 1 | ug/kg | 102 | | 75-120 | | |
| 1,2-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 112 | | 80-120 | | |
| 1,3-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 108 | | 80-120 | | |
| 1,4-Dichlorobenzene | 5 | U | 5. | 1 | ug/kg | 110 | | 80-120 | | |
| Dichlorodifluoromethane | 5 | U | 5. | 2 | ug/kg | 73 | | 26-137 | | |
| 1,1-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 71-122 | | |
| 1,2-Dichloroethane | 5 | U | 5. | 1 | ug/kg | 105 | | 66-136 | | |
| 1,1-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 96 | | 73-129 | | |
| cis-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 107 | | 80-120 | | |
| trans-1,2-Dichloroethene | 5 | U | 5. | 1 | ug/kg | 112 | | 79-120 | | |
| 1,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 107 | | 77-120 | | |
| 1,3-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 104 | | 73-120 | | |
| 2,2-Dichloropropane | 5 | U | 5. | 1 | ug/kg | 105 | | 72-123 | | |
| 1,1-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 111 | | 77-120 | | |
| cis-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 105 | | 74-120 | | |
| trans-1,3-Dichloropropene | 5 | U | 5. | 1 | ug/kg | 105 | | 69-120 | | |
| Ethyl t-butyl ether | 5 | U | 5. | 1 | ug/kg | 104 | | 59-134 | | |
| Ethylbenzene | 5 | U | 5. | 1 | ug/kg | 110 | | 80-120 | | |
| Freon 113 | 5 | U | 5. | 2 | ug/kg | 88 | | 64-137 | | |
| Freon 133a | 5 | U | 5. | 2 | ug/kg | 104 | | 78-120 | | |
| Hexachlorobutadiene | 5 | U | 5. | 2 | ug/kg | 106 | | 46-130 | | |
| 2-Hexanone | 10 | U | 10. | 3 | ug/kg | 99 | | 40-129 | | |
| di-Isopropyl ether | 5 | U | 5. | 1 | ug/kg | 107 | | 68-128 | | |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/kg | 111 | | 76-120 | | |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/kg | 111 | | 69-120 | | |
| Methyl Iodide | 5 | U | 5. | 3 | ug/kg | 92 | | 72-130 | | |
| Methyl Tertiary Butyl Ether | 5 | U | 5. | 0.5 | ug/kg | 105 | | 69-126 | | |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/kg | 98 | | 43-133 | | |
| Methylene Chloride | 5 | U | 5. | 2 | ug/kg | 102 | | 80-124 | | |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/kg | 111 | | 77-120 | | |
| Styrene | 5 | U | 5. | 1 | ug/kg | 111 | | 76-120 | | |
| 1,1,1,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 105 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 5. | 1 | ug/kg | 103 | | 71-123 | | |
| Tetrachloroethene | 5 | U | 5. | 1 | ug/kg | 111 | | 78-120 | | |
| Toluene | 5 | U | 5. | 1 | ug/kg | 108 | | 80-120 | | |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 107 | | 64-120 | | |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/kg | 110 | | 68-120 | | |
| 1,1,1-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 105 | | 63-135 | | |
| 1,1,2-Trichloroethane | 5 | U | 5. | 1 | ug/kg | 104 | | 80-120 | | |
| Trichloroethene | 5 | U | 5. | 1 | ug/kg | 109 | | 80-120 | | |
| Trichlorofluoromethane | 5 | U | 5. | 2 | ug/kg | 86 | | 58-133 | | |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/kg | 107 | | 71-123 | | |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 111 | | 79-120 | | |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/kg | 112 | | 78-120 | | |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/kg | 111 | | 40-127 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

| Analysis Name | Blank Result | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 5 U | 5. | 1 | ug/kg | 91 | | 59-120 | | |
| m+p-Xylene | 5 U | 5. | 1 | ug/kg | 111 | | 80-120 | | |
| o-Xylene | 5 U | 5. | 1 | ug/kg | 109 | | 80-120 | | |
| Batch number: Y141701AA | Sample number(s): 7494355 | | | | | | | | |
| Acetone | 20 U | 20. | 6 | ug/l | 82 | 85 | 43-149 | 4 | 30 |
| Acrolein | 100 U | 100. | 40 | ug/l | 97 | 94 | 52-129 | 3 | 30 |
| Acrylonitrile | 20 U | 20. | 4 | ug/l | 89 | 94 | 62-120 | 6 | 30 |
| t-Amyl methyl ether | 1 U | 1. | 0.5 | ug/l | 101 | 102 | 75-120 | 1 | 30 |
| Benzene | 1 U | 1. | 0.5 | ug/l | 103 | 105 | 78-120 | 1 | 30 |
| Bromobenzene | 5 U | 5. | 1 | ug/l | 102 | 103 | 80-120 | 1 | 30 |
| Bromochloromethane | 5 U | 5. | 1 | ug/l | 101 | 101 | 80-121 | 0 | 30 |
| Bromodichloromethane | 1 U | 1. | 0.5 | ug/l | 97 | 97 | 73-120 | 0 | 30 |
| Bromoform | 4 U | 4. | 0.5 | ug/l | 91 | 90 | 61-120 | 1 | 30 |
| Bromomethane | 1 U | 1. | 0.5 | ug/l | 92 | 95 | 58-120 | 3 | 30 |
| 2-Butanone | 10 U | 10. | 3 | ug/l | 95 | 96 | 54-133 | 1 | 30 |
| t-Butyl alcohol | 50 U | 50. | 5 | ug/l | 115 | 113 | 75-120 | 2 | 30 |
| n-Butylbenzene | 5 U | 5. | 1 | ug/l | 106 | 107 | 68-120 | 1 | 30 |
| sec-Butylbenzene | 5 U | 5. | 1 | ug/l | 108 | 109 | 80-120 | 1 | 30 |
| tert-Butylbenzene | 5 U | 5. | 1 | ug/l | 104 | 106 | 73-120 | 2 | 30 |
| Carbon Disulfide | 5 U | 5. | 1 | ug/l | 86 | 90 | 58-126 | 4 | 30 |
| Carbon Tetrachloride | 1 U | 1. | 0.5 | ug/l | 100 | 103 | 74-130 | 3 | 30 |
| Chlorobenzene | 1 U | 1. | 0.5 | ug/l | 102 | 105 | 80-120 | 2 | 30 |
| Chloroethane | 1 U | 1. | 0.5 | ug/l | 87 | 87 | 56-120 | 0 | 30 |
| 2-Chloroethyl Vinyl Ether | 10 U | 10. | 2 | ug/l | 101 | 103 | 54-126 | 2 | 30 |
| Chloroform | 1 U | 1. | 0.5 | ug/l | 103 | 104 | 80-122 | 1 | 30 |
| 1-Chlorohexane | 5 U | 5. | 1 | ug/l | 104 | 107 | 80-120 | 3 | 30 |
| Chloromethane | 1 U | 1. | 0.5 | ug/l | 104 | 97 | 63-120 | 7 | 30 |
| 2-Chlorotoluene | 5 U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 1 | 30 |
| 4-Chlorotoluene | 5 U | 5. | 1 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| Chlorotrifluoroethene | 5 U | 5. | 2 | ug/l | 85 | 82 | 47-120 | 4 | 30 |
| 1,2-Dibromo-3-chloropropane | 5 U | 5. | 2 | ug/l | 98 | 99 | 56-120 | 0 | 30 |
| Dibromochloromethane | 1 U | 1. | 0.5 | ug/l | 91 | 92 | 72-120 | 1 | 30 |
| 1,2-Dibromoethane | 1 U | 1. | 0.5 | ug/l | 105 | 107 | 76-120 | 2 | 30 |
| Dibromomethane | 1 U | 1. | 0.5 | ug/l | 103 | 102 | 80-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 0 | 30 |
| 1,3-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 102 | 102 | 80-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 5 U | 5. | 1 | ug/l | 101 | 103 | 80-120 | 2 | 30 |
| Dichlorodifluoromethane | 1 U | 1. | 0.5 | ug/l | 85 | 84 | 48-132 | 1 | 30 |
| 1,1-Dichloroethane | 1 U | 1. | 0.5 | ug/l | 103 | 105 | 80-120 | 2 | 30 |
| 1,2-Dichloroethane | 1 U | 1. | 0.5 | ug/l | 105 | 105 | 65-135 | 0 | 30 |
| 1,1-Dichloroethene | 1 U | 1. | 0.5 | ug/l | 94 | 98 | 76-124 | 4 | 30 |
| cis-1,2-Dichloroethene | 1 U | 1. | 0.5 | ug/l | 105 | 107 | 80-120 | 2 | 30 |
| trans-1,2-Dichloroethene | 1 U | 1. | 0.5 | ug/l | 103 | 106 | 80-120 | 3 | 30 |
| 1,2-Dichloropropane | 1 U | 1. | 0.5 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| 1,3-Dichloropropane | 1 U | 1. | 0.5 | ug/l | 101 | 104 | 80-120 | 3 | 30 |
| 2,2-Dichloropropane | 1 U | 1. | 0.5 | ug/l | 103 | 106 | 67-124 | 3 | 30 |
| 1,1-Dichloropropene | 5 U | 5. | 1 | ug/l | 106 | 107 | 80-120 | 0 | 30 |
| cis-1,3-Dichloropropene | 1 U | 1. | 0.5 | ug/l | 98 | 99 | 80-120 | 1 | 30 |
| trans-1,3-Dichloropropene | 1 U | 1. | 0.5 | ug/l | 100 | 100 | 76-120 | 1 | 30 |
| Ethyl t-butyl ether | 1 U | 1. | 0.5 | ug/l | 102 | 102 | 74-120 | 0 | 30 |
| Ethylbenzene | 1 U | 1. | 0.5 | ug/l | 101 | 102 | 79-120 | 1 | 30 |
| Freon 113 | 10 U | 10. | 2 | ug/l | 82 | 85 | 67-127 | 4 | 30 |
| Freon 133a | 5 U | 5. | 2 | ug/l | 115 | 116 | 46-152 | 1 | 30 |
| Hexachlorobutadiene | 5 U | 5. | 2 | ug/l | 101 | 100 | 51-125 | 1 | 30 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | 10 | U | 10. | 3 | ug/l | 96 | 97 | 44-126 | 1 | 30 |
| di-Isopropyl ether | 1 | U | 1. | 0.5 | ug/l | 104 | 104 | 65-120 | 0 | 30 |
| Isopropylbenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 77-120 | 1 | 30 |
| p-Isopropyltoluene | 5 | U | 5. | 1 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| Methyl Iodide | 1 | U | 1. | 0.5 | ug/l | 106 | 106 | 75-128 | 0 | 30 |
| Methyl Tertiary Butyl Ether | 1 | U | 1. | 0.5 | ug/l | 99 | 101 | 75-120 | 2 | 30 |
| 4-Methyl-2-pentanone | 10 | U | 10. | 3 | ug/l | 97 | 98 | 51-124 | 1 | 30 |
| Methylene Chloride | 3 | U | 3. | 2 | ug/l | 93 | 95 | 80-120 | 2 | 30 |
| n-Propylbenzene | 5 | U | 5. | 1 | ug/l | 106 | 107 | 80-120 | 2 | 30 |
| Styrene | 5 | U | 5. | 1 | ug/l | 101 | 103 | 80-120 | 2 | 30 |
| 1,1,1,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 100 | 103 | 80-120 | 2 | 30 |
| 1,1,2,2-Tetrachloroethane | 1 | U | 1. | 0.5 | ug/l | 102 | 104 | 70-120 | 2 | 30 |
| Tetrachloroethene | 1 | U | 1. | 0.5 | ug/l | 101 | 104 | 80-120 | 3 | 30 |
| Toluene | 1 | U | 1. | 0.5 | ug/l | 104 | 106 | 80-120 | 2 | 30 |
| 1,2,3-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 100 | 100 | 58-126 | 1 | 30 |
| 1,2,4-Trichlorobenzene | 5 | U | 5. | 1 | ug/l | 103 | 104 | 65-120 | 2 | 30 |
| 1,1,1-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 99 | 99 | 66-126 | 0 | 30 |
| 1,1,2-Trichloroethane | 1 | U | 1. | 0.5 | ug/l | 103 | 104 | 80-120 | 0 | 30 |
| Trichloroethene | 1 | U | 1. | 0.5 | ug/l | 105 | 106 | 80-120 | 1 | 30 |
| Trichlorofluoromethane | 1 | U | 1. | 0.5 | ug/l | 86 | 90 | 65-130 | 4 | 30 |
| 1,2,3-Trichloropropane | 5 | U | 5. | 1 | ug/l | 102 | 104 | 76-120 | 2 | 30 |
| 1,2,4-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 104 | 106 | 74-120 | 1 | 30 |
| 1,3,5-Trimethylbenzene | 5 | U | 5. | 1 | ug/l | 106 | 106 | 74-120 | 0 | 30 |
| Vinyl Acetate | 10 | U | 10. | 2 | ug/l | 81 | 72 | 56-135 | 11 | 30 |
| Vinyl Chloride | 1 | U | 1. | 0.5 | ug/l | 102 | 95 | 63-120 | 7 | 30 |
| m+p-Xylene | 1 | U | 1. | 0.5 | ug/l | 101 | 102 | 80-120 | 1 | 30 |
| o-Xylene | 1 | U | 1. | 0.5 | ug/l | 101 | 103 | 80-120 | 1 | 30 |
| Batch number: 14169162401A | Sample number(s): 7494356-7494359 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B141751AA | Sample number(s): 7494356 UNSPK: P497908 | | | | | | | | |
| Acetone | 99 | 82 | 31-195 | 19 | 30 | | | | |
| Acrolein | 34 | 35 | 10-165 | 3 | 30 | | | | |
| Acrylonitrile | 90 | 72 | 48-139 | 24 | 30 | | | | |
| t-Amyl methyl ether | 101 | 86 | 50-132 | 17 | 30 | | | | |
| Benzene | 112 | 97 | 55-143 | 15 | 30 | | | | |
| Bromobenzene | 104 | 73 | 43-139 | 35* | 30 | | | | |
| Bromochloromethane | 104 | 90 | 60-137 | 15 | 30 | | | | |
| Bromodichloromethane | 94 | 79 | 53-136 | 18 | 30 | | | | |
| Bromoform | 74 | 60 | 50-144 | 21 | 30 | | | | |
| Bromomethane | 75 | 67 | 42-168 | 13 | 30 | | | | |
| 2-Butanone | 84 | 74 | 37-163 | 13 | 30 | | | | |
| t-Butyl alcohol | 134 | 90 | 47-153 | 41* | 30 | | | | |
| n-Butylbenzene | 107 | 76 | 30-146 | 35* | 30 | | | | |
| sec-Butylbenzene | 124 | 88 | 33-157 | 35* | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | 126 | 90 | 41-152 | 34* | 30 | | | | |
| Carbon Disulfide | 98 | 91 | 48-146 | 9 | 30 | | | | |
| Carbon Tetrachloride | 103 | 94 | 51-165 | 10 | 30 | | | | |
| Chlorobenzene | 107 | 84 | 49-135 | 25 | 30 | | | | |
| Chloroethane | 71 | 64 | 39-152 | 11 | 30 | | | | |
| 2-Chloroethyl Vinyl Ether | 85 | 72 | 32-139 | 18 | 30 | | | | |
| Chloroform | 113 | 98 | 61-142 | 15 | 30 | | | | |
| 1-Chlorohexane | 114 | 88 | 70-130 | 27 | 30 | | | | |
| Chloromethane | 109 | 96 | 36-143 | 14 | 30 | | | | |
| 2-Chlorotoluene | 113 | 80 | 42-146 | 36* | 30 | | | | |
| 4-Chlorotoluene | 108 | 76 | 39-145 | 36* | 30 | | | | |
| Chlorotrifluoroethene | 108 | 106 | 70-130 | 1 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 75 | 56 | 34-165 | 30 | 30 | | | | |
| Dibromochloromethane | 90 | 71 | 51-128 | 24 | 30 | | | | |
| 1,2-Dibromoethane | 106 | 85 | 54-129 | 23 | 30 | | | | |
| Dibromomethane | 98 | 84 | 57-130 | 16 | 30 | | | | |
| 1,2-Dichlorobenzene | 87 | 60 | 36-133 | 39* | 30 | | | | |
| 1,3-Dichlorobenzene | 91 | 61 | 34-134 | 40* | 30 | | | | |
| 1,4-Dichlorobenzene | 89 | 61 | 35-136 | 39* | 30 | | | | |
| Dichlorodifluoromethane | 114 | 99 | 26-151 | 14 | 30 | | | | |
| 1,1-Dichloroethane | 114 | 100 | 63-142 | 14 | 30 | | | | |
| 1,2-Dichloroethane | 107 | 91 | 54-143 | 17 | 30 | | | | |
| 1,1-Dichloroethene | 118 | 108 | 61-149 | 10 | 30 | | | | |
| cis-1,2-Dichloroethene | 113 | 99 | 67-135 | 15 | 30 | | | | |
| trans-1,2-Dichloroethene | 125 | 107 | 64-144 | 17 | 30 | | | | |
| 1,2-Dichloropropane | 110 | 93 | 54-144 | 17 | 30 | | | | |
| 1,3-Dichloropropane | 108 | 87 | 51-140 | 22 | 30 | | | | |
| 2,2-Dichloropropane | 111 | 101 | 53-147 | 11 | 30 | | | | |
| 1,1-Dichloropropene | 112 | 108 | 54-145 | 5 | 30 | | | | |
| cis-1,3-Dichloropropene | 96 | 82 | 45-137 | 17 | 30 | | | | |
| trans-1,3-Dichloropropene | 99 | 80 | 51-134 | 22 | 30 | | | | |
| Ethyl t-butyl ether | 106 | 90 | 58-124 | 17 | 30 | | | | |
| Ethylbenzene | 116 | 93 | 44-141 | 23 | 30 | | | | |
| Freon 113 | 110 | 98 | 56-156 | 13 | 30 | | | | |
| Freon 133a | 123 | 123 | 61-131 | 2 | 30 | | | | |
| Hexachlorobutadiene | 80 | 55 | 10-155 | 38* | 30 | | | | |
| 2-Hexanone | 88 | 75 | 32-160 | 17 | 30 | | | | |
| di-Isopropyl ether | 114 | 97 | 59-133 | 17 | 30 | | | | |
| Isopropylbenzene | 114 | 91 | 38-144 | 23 | 30 | | | | |
| p-Isopropyltoluene | 116 | 82 | 29-152 | 35* | 30 | | | | |
| Methyl Iodide | 109 | 98 | 52-139 | 12 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 107 | 87 | 55-129 | 21 | 30 | | | | |
| 4-Methyl-2-pentanone | 88 | 77 | 46-139 | 15 | 30 | | | | |
| Methylene Chloride | 113 | 97 | 60-149 | 16 | 30 | | | | |
| n-Propylbenzene | 125 | 90 | 39-157 | 33* | 30 | | | | |
| Styrene | 99 | 77 | 35-134 | 26 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 100 | 79 | 55-139 | 25 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 102 | 75 | 29-182 | 32* | 30 | | | | |
| Tetrachloroethene | 118 | 97 | 42-149 | 21 | 30 | | | | |
| Toluene | 120 | 98 | 50-146 | 20 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 45 | 30 | 10-140 | 43* | 30 | | | | |
| 1,2,4-Trichlorobenzene | 51 | 34 | 10-136 | 42* | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 99 | 91 | 52-146 | 9 | 30 | | | | |
| 1,1,2-Trichloroethane | 109 | 87 | 58-152 | 23 | 30 | | | | |
| Trichloroethene | 112 | 98 | 53-144 | 14 | 30 | | | | |
| Trichlorofluoromethane | 108 | 96 | 47-163 | 12 | 30 | | | | |
| 1,2,3-Trichloropropane | 109 | 81 | 36-180 | 30 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 113 | 79 | 37-149 | 37* | 30 | | | | |
| 1,3,5-Trimethylbenzene | 122 | 86 | 38-150 | 36* | 30 | | | | |
| Vinyl Acetate | 18* | 29 | 21-139 | 46* | 30 | | | | |
| Vinyl Chloride | 115 | 102 | 50-154 | 13 | 30 | | | | |
| m+p-Xylene | 115 | 92 | 44-137 | 23 | 30 | | | | |
| o-Xylene | 110 | 87 | 42-137 | 25 | 30 | | | | |
| Batch number: 14169162401A | Sample number(s): 7494356-7494359 | | | | | BKG: 7494357 | | | |
| 14a Moisture Content by 160.3 | | | | | | 6.6 | 7.9 | 18 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141642AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7494357 | 105 | 103 | 97 | 94 |
| 7494358 | 105 | 101 | 96 | 93 |
| 7494359 | 109 | 111 | 97 | 94 |
| Blank | 107 | 108 | 98 | 93 |
| LCS | 105 | 103 | 100 | 104 |
| LCSD | 104 | 103 | 100 | 99 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12a Volatile Organics EPA8260B
Batch number: B141751AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7494356 | 102 | 112 | 100 | 99 |
| Blank | 99 | 101 | 101 | 97 |
| LCS | 101 | 102 | 100 | 99 |
| MS | 101 | 104 | 107 | 91 |
| MSD | 102 | 106 | 103 | 96 |
| Limits: | 80-120 | 80-120 | 81-117 | 74-121 |

Analysis Name: 12b Volatile Organics EPA8260B
Batch number: Y141701AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480924
Reported: 07/07/14 at 12:18 PM

## Surrogate Quality Control

| | | | | |
|---|---|---|---|---|
| 7494355 | 100 | 102 | 100 | 97 |
| Blank | 99 | 102 | 99 | 97 |
| LCS | 100 | 102 | 100 | 100 |
| LCSD | 99 | 102 | 101 | 100 |
| Limits: | 86-118 | 80-120 | 88-110 | 86-115 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

13013 1480924 7494355-59

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/10/2014
CarrierName: FedEx
AirbillNo: 770258229814

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140610-02
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc. Nitrate_Nitrite_TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB2-061014 | 6/10/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-551-SA6-SB-4.0-5.0 | 6/10/14 09:45 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-551-SA6-SB-4.0-5.0 | 6/10/14 09:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-562-SA5B-SB-8.0-9.0 | 6/10/14 14:45 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-562-SA5B-SB-8.0-9.0 | 6/10/14 14:45 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-549-SA5C-SB-6.3-6.8 | 6/10/14 14:23 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-549-SA5C-SB-6.3-6.8 | 6/10/14 14:23 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |
| SVL-561-SA5C-SB-10.5-11.0 | 6/10/14 13:24 | SO | None | 3 - Encore | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| SVL-561-SA5C-SB-10.5-11.0 | 6/10/14 13:24 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | Soil Moisture |

Special Instructions:

**Sampler:** Andrew Payne Rob Ellis

| Relinquished by | Date | Time | Received by | Date | Time | Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steff Mypel | 06/10/14 | 1600 | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 6-11-14 | 915 |

Soil Vapor 1 of 1

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 16982

Group Number(s): 1480924

Client: CDM

## SSFL

### Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 06/11/2014 9:15 |
| Number of Packages: | 1 | Number of Projects: | 1 |
| State/Province of Origin: | CA | | |

### Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Total Trip Blank Qty: | 6 |
| Custody Seal Present: | Yes | Trip Blank Type: | HCL |
| Custody Seal Intact: | Yes | Air Quality Samples Present: | No |
| Samples Chilled: | Yes | Air Quality Flow Controllers Present: | N/A |
| Paperwork Enclosed: | Yes | Flow Controller Quantity: | 0 |
| Samples Intact: | Yes | Air Quality Returns: | N/A |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |
| Sample IDs on COC match Containers: | Yes | | |
| Sample Date/Times match COC: | Yes | | |
| VOA Vial Headspace ≥ 6mm: | No | | |
| VOA IDs ( ≥ 6mm): | N/A | | |

Unpacked by Brandy Barclay (2299) at 09:44 on 06/11/2014

### Samples Chilled Details: SSFL

*Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Samples Collected Same Day as Receipt? | Elevated Temp? |
|---|---|---|---|---|---|---|---|---|
| 1 | DT121 | 0.8 | DT | Wet | Y | Bagged | N | N |



2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

# Explanation of Symbols and Abbreviations

*The following defines common symbols and abbreviations used in reporting technical data:*

| | | | |
|---|---|---|---|
| **RL** | Reporting Limit | **BMQL** | Below Minimum Quantitation Level |
| **N.D.** | none detected | **MPN** | Most Probable Number |
| **TNTC** | Too Numerous To Count | **CP Units** | cobalt-chloroplatinate units |
| **IU** | International Units | **NTU** | nephelometric turbidity units |
| **umhos/cm** | micromhos/cm | **ng** | nanogram(s) |
| **C** | degrees Celsius | **F** | degrees Fahrenheit |
| **meq** | milliequivalents | **lb.** | pound(s) |
| **g** | gram(s) | **kg** | kilogram(s) |
| **µg** | microgram(s) | **mg** | milligram(s) |
| **mL** | milliliter(s) | **L** | liter(s) |
| **m3** | cubic meter(s) | **µL** | microliter(s) |
| | | **pg/L** | picogram/liter |

**<** less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

**>** greater than

**ppm** parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*Data Qualifiers:*

**C –** result confirmed by reanalysis.

**J -** estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

*U.S. EPA CLP Data Qualifiers:*

| Organic Qualifiers | | Inorganic Qualifiers | |
|---|---|---|---|
| **A** | TIC is a possible aldol-condensation product | **B** | Value is <CRDL, but ≥IDL |
| **B** | Analyte was also detected in the blank | **E** | Estimated due to interference |
| **C** | Pesticide result confirmed by GC/MS | **M** | Duplicate injection precision not met |
| **D** | Compound quantitated on a diluted sample | **N** | Spike sample not within control limits |
| **E** | Concentration exceeds the calibration range of the instrument | **S** | Method of standard additions (MSA) used for calculation |
| **N** | Presumptive evidence of a compound (TICs only) | **U** | Compound was not detected |
| **P** | Concentration difference between primary and confirmation columns >25% | **W** | Post digestion spike out of control limits |
| **U** | Compound was not detected | ***** | Duplicate analysis not within control limits |
| **X,Y,Z** | Defined in case narrative | **+** | Correlation coefficient for MSA <0.995 |

**Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

July 07, 2014

Project: SSFL Phase 3 Sampling

Submittal Date: 06/11/2014
Group Number: 1480926
SDG: PH227
PO Number: 1204-002-001-AL
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LL) # |
|---|---|
| TB1-061014 Water | 7494361 |
| FDG2-SL-630-SA8-SB-0.0-0.5 Soil | 7494362 |
| FDG2-SL-630-SA8-SB-4.0-5.0 Soil | 7494363 |
| FDG2-SL-630-SA8-SB-4.0-5.0MS Soil | 7494364 |
| FDG2-SL-630-SA8-SB-4.0-5.0MSD Soil | 7494365 |
| FDG2-SL-930-SA8-SB-4.0-5.0 Soil | 7494366 |
| FDG2-SL-630-SA8-SB-7.0-8.0 Soil | 7494367 |
| FDG2-SL-612-SA5D-SB-0.0-0.5 Soil | 7494368 |
| FDG2-SL-564-NBZ-SB-0.0-0.5 Soil | 7494369 |
| FDG2-SL-565-NBZ-SB-0.0-0.5 Soil | 7494370 |
| FDG2-SL-566-NBZ-SB-0.0-0.5 Soil | 7494371 |
| FDG2-SL-576-NBZ-SB-0.0-0.5 Soil | 7494372 |
| FDG2-SL-576-NBZ-SB-2.0-3.0 Soil | 7494373 |
| FDG2-SL-613-SA5D-SB-0.0-0.5 Soil | 7494374 |
| FDG2-SL-614-SA5D-SB-0.0-0.5 Soil | 7494375 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Eurofins Lancaster Labs Env Attn: Nicole Maljovec

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

**Sample Description: TB1-061014 Water**
**SSFL Phase 3 Subarea 8**

**LL Sample # WW 7494361**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:00

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

TB161 SDG#: PH227-01TB

| CAT No. | Analysis Name | CAS Number | As Received Result | | As Received Limit of Quantitation* | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-8015B** | | ug/l | | ug/l | ug/l | |
| 08229 | TPH-GRO S.CA water C5-C12 | n.a. | 50 | U | 50 | 20 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 08229 | 11b TPH by EPA 8015B GRO | TPH GRO SW-8015B | 1 | 14167A94A | 06/17/2014 12:00 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 14167A94A | 06/17/2014 12:00 | Laura M Krieger | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-630-SA8-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 8

**LL Sample # SW 7494362**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 07:55 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63000 SDG#: PH227-02

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.3 | J | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 21 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 35 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.3 | J | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 5.2 | J | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 4.2 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 09:47 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 19:02 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-630-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494363**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:30 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63040 SDG#: PH227-03BKG

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 27.06 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.7 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 26 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 42 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 14 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 14 | | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 8.5 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/13/2014 22:49 | Marie D Beamenderfer | 27.06 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201416234775 | 06/11/2014 15:40 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201416234775 | 06/11/2014 15:40 | Mitchell R Washel | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 10:08 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 20:13 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-630-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494363**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:30 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63040 SDG#: PH227-03BKG

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-630-SA8-SB-4.0-5.0MS Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494364**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:30 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63040 SDG#: PH227-03MS

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 11 | | 1.3 | 0.3 | 28.67 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.7 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 12 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 42 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 60 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.1 | J | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 6.7 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 20 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 22 | | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.2 | J | 5.5 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 8.5 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/13/2014 23:27 | Marie D Beamenderfer | 28.67 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201416234775 | 06/11/2014 15:41 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201416234775 | 06/11/2014 15:41 | Mitchell R Washel | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 10:29 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 20:47 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-630-SA8-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494365**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:30 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63040 SDG#: PH227-03MSD

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 10 | | 1.2 | 0.2 | 26.71 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 4.9 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 14 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 55 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 78 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 4.6 | J | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 4.0 | J | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 7.3 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 29 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 32 | | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 3.1 | J | 5.5 | 2.2 | 1 |

The reverse surrogate, capric acid, is present at <1%.
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11625 | 14a Moisture Content by 160.3 | n.a. | 8.5 | | 0.10 | 0.10 | 1 |
| 11626 | 14a Moisture Content by 160.3 | n.a. | 8.5 | | 0.10 | 0.10 | 1 |

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/14/2014 00:04 | Marie D Beamenderfer | 26.71 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201416234775 | 06/11/2014 15:42 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201416234775 | 06/11/2014 15:42 | Mitchell R Washel | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 10:51 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 21:08 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-630-SA8-SB-4.0-5.0MSD Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494365**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:30 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63040 SDG#: PH227-03MSD

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11625 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |
| 11626 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-930-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494366**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:40 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

93040 SDG#: PH227-04

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 27.29 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 4.8 | J | 5.5 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 35 | | 5.5 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 61 | | 11 | 4.4 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 19 | | 5.5 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 21 | | 11 | 4.4 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.5 | U | 5.5 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 8.8 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/14/2014 01:20 | Marie D Beamenderfer | 27.29 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201416234775 | 06/11/2014 15:44 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201416234775 | 06/11/2014 15:44 | Mitchell R Washel | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 11:12 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 21:30 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-930-SA8-SB-4.0-5.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494366**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:40 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

93040 SDG#: PH227-04

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-630-SA8-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494367**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:05 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63078 SDG#: PH227-05

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.2 | U | 1.2 | 0.2 | 26.6 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.4 | J | 5.4 | 2.2 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 24 | | 5.4 | 2.2 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 50 | | 11 | 4.3 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 8.8 | | 5.4 | 2.2 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 11 | | 11 | 4.3 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.4 | U | 5.4 | 2.2 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 8.0 | | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/14/2014 | 01:58 | Marie D Beamenderfer | 26.6 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201416234775 | 06/11/2014 | 15:45 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201416234775 | 06/11/2014 | 15:45 | Mitchell R Washel | n.a. |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 | 11:34 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 | 21:59 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 | 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 | 18:00 | Sally L Appleyard | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-630-SA8-SB-7.0-8.0 Soil**
**SSFL Phase 3 Subarea 8**

**LL Sample # SW 7494367**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:05 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

63078 SDG#: PH227-05

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-612-SA5D-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7494368**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 11:00 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61200 SDG#: PH227-06

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 26 | U | 26 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 20 | J | 26 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 140 | | 26 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 250 | | 51 | 21 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 13 | J | 26 | 10 | 5 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 10 | | 5.1 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 26 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/18/2014 18:11 | Heather E Williams | 5 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 22:34 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-564-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494369**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 10:05 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56400 SDG#: PH227-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 1.6 | J | 1.7 | 0.68 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 3.1 | | 1.7 | 0.68 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 19 | | 18 | 6.1 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Chrysene | 218-01-9 | 1.8 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 18 | J | 18 | 6.1 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.8 | | 1.7 | 0.68 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.74 | J | 1.7 | 0.68 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 1.1 | J | 1.7 | 0.68 | 1 |
| 12969 | Naphthalene | 91-20-3 | 2.6 | | 1.7 | 0.68 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.68 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.1 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.5 | J | 1.7 | 0.68 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.4 | J | 1.7 | 0.68 | 1 |

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
N-Nitrosodimethylamine

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 3.6 | J | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-564-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494369**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 10:05 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56400 SDG#: PH227-07

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 23 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 30 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.5 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 4.4 | J | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 14,900 | | 40.3 | 7.27 | 1 |
| 06944 | Antimony | 7440-36-0 | 4.03 | U | 4.03 | 0.746 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.44 | | 4.03 | 0.706 | 1 |
| 06946 | Barium | 7440-39-3 | 86.3 | | 1.01 | 0.0333 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.580 | J | 1.01 | 0.0676 | 1 |
| 07914 | Boron | 7440-42-8 | 3.95 | J | 10.1 | 0.847 | 1 |
| 06949 | Cadmium | 7440-43-9 | 1.01 | U | 1.01 | 0.0766 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,610 | | 20.2 | 3.37 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.7 | | 3.02 | 0.161 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.13 | | 1.01 | 0.0998 | 1 |
| 06953 | Copper | 7440-50-8 | 9.70 | | 2.02 | 0.292 | 1 |
| 01654 | Iron | 7439-89-6 | 21,300 | | 40.3 | 3.65 | 1 |
| 06955 | Lead | 7439-92-1 | 11.2 | | 3.02 | 0.504 | 1 |
| 01656 | Lithium | 7439-93-2 | 22.4 | | 4.0 | 0.34 | 1 |
| 01657 | Magnesium | 7439-95-4 | 5,450 | | 10.1 | 1.68 | 1 |
| 06958 | Manganese | 7439-96-5 | 353 | | 1.01 | 0.0837 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.298 | J | 2.02 | 0.171 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.9 | | 2.02 | 0.131 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 382 | | 10.1 | 2.91 | 1 |
| 01662 | Potassium | 7440-09-7 | 3,170 | | 101 | 8.41 | 1 |
| 01667 | Sodium | 7440-23-5 | 73.1 | J | 101 | 16.8 | 1 |
| 06969 | Tin | 7440-31-5 | 2.76 | J | 10.1 | 0.222 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,120 | | 1.01 | 0.171 | 1 |
| 06971 | Vanadium | 7440-62-2 | 42.2 | | 1.01 | 0.131 | 1 |
| 06972 | Zinc | 7440-66-6 | 54.1 | | 4.03 | 0.202 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.96 | J | 5.04 | 0.847 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.459 | | 0.403 | 0.101 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0534 | J | 0.202 | 0.0262 | 2 |
| 06144 | Strontium | 7440-24-6 | 22.9 | | 0.403 | 0.0686 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.225 | | 0.202 | 0.0302 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0322 | | 0.0158 | 0.0095 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-564-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494369**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 10:05 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56400 SDG#: PH227-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 22.4 C. | n.a. | 5.92 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 1.8 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14163SLB026 | 06/18/2014 09:33 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 14163SLB026 | 06/12/2014 17:00 | JoElla L Rice | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141690028A | 06/23/2014 10:32 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141690028A | 06/19/2014 09:45 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 23:04 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 22:55 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-564-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7494369**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 10:05 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56400 SDG#: PH227-07

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06958 | Manganese | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:50 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141680637002B | 06/19/2014 07:04 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:04 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:04 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:04 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141680638002 | 06/19/2014 10:32 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141680637002 | 06/18/2014 12:24 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141680638002 | 06/18/2014 14:47 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14162039402A | 06/11/2014 21:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-565-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494370**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:35 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56500 SDG#: PH227-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC/MS Semivolatiles** | **SW-846 8270D SIM** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 12969 | Acenaphthene | 83-32-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Acenaphthylene | 208-96-8 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Anthracene | 120-12-7 | 1.7 | U | 1.7 | 0.34 | 1 |
| 12969 | Benzo(a)anthracene | 56-55-3 | 2.2 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.81 | J | 1.7 | 0.67 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | 2.1 | | 1.7 | 0.67 | 1 |
| 12969 | Benzo(e)pyrene | 192-97-2 | 17 | U | 17 | 3.4 | 1 |
| 12969 | Benzo(g,h,i)perylene | 191-24-2 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | 5.4 | | 1.7 | 0.67 | 1 |
| 12969 | Butylbenzylphthalate | 85-68-7 | 120 | | 18 | 6.0 | 1 |
| 12969 | Di-n-butylphthalate | 84-74-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Chrysene | 218-01-9 | 2.9 | | 1.7 | 0.34 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Diethylphthalate | 84-66-2 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Dimethylphthalate | 131-11-3 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Bis(2-Ethylhexyl)phthalate | 117-81-7 | 54 | | 18 | 6.0 | 1 |
| 12969 | Fluoranthene | 206-44-0 | 1.9 | | 1.7 | 0.67 | 1 |
| 12969 | Fluorene | 86-73-7 | 1.3 | J | 1.7 | 0.67 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.95 | J | 1.7 | 0.67 | 1 |
| 12969 | Naphthalene | 91-20-3 | 1.7 | | 1.7 | 0.67 | 1 |
| 12969 | N-Nitrosodimethylamine | 62-75-9 | 1.7 | U | 1.7 | 0.67 | 1 |
| 12969 | Di-n-octylphthalate | 117-84-0 | 18 | U | 18 | 6.0 | 1 |
| 12969 | Phenanthrene | 85-01-8 | 1.1 | J | 1.7 | 0.67 | 1 |
| 12969 | Pyrene | 129-00-0 | 1.5 | J | 1.7 | 0.67 | 1 |
| | The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chrysene | | | | | | |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 7.5 | J | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 2.4 | J | 5.1 | 2.0 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 6.7 | | 5.1 | 2.0 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-565-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494370**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:35 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56500 SDG#: PH227-08

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C21-C30) | n.a. | 45 | | 5.1 | 2.0 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 61 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 6.4 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.3 | J | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 4.8 | J | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | Due to the matrix of the sample extract, capric acid recovery can not be determined. | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 13,300 | | 39.2 | 7.07 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.92 | U | 3.92 | 0.725 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.75 | | 3.92 | 0.686 | 1 |
| 06946 | Barium | 7440-39-3 | 65.9 | | 0.980 | 0.0323 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.519 | J | 0.980 | 0.0657 | 1 |
| 07914 | Boron | 7440-42-8 | 3.99 | J | 9.80 | 0.823 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.980 | U | 0.980 | 0.0745 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,510 | | 19.6 | 3.27 | 1 |
| 06951 | Chromium | 7440-47-3 | 21.6 | | 2.94 | 0.157 | 1 |
| 06952 | Cobalt | 7440-48-4 | 5.33 | | 0.980 | 0.0970 | 1 |
| 06953 | Copper | 7440-50-8 | 9.70 | | 1.96 | 0.284 | 1 |
| 01654 | Iron | 7439-89-6 | 21,800 | | 39.2 | 3.55 | 1 |
| 06955 | Lead | 7439-92-1 | 11.1 | | 2.94 | 0.490 | 1 |
| 01656 | Lithium | 7439-93-2 | 25.9 | | 3.9 | 0.33 | 1 |
| 01657 | Magnesium | 7439-95-4 | 6,380 | | 9.80 | 1.64 | 1 |
| 06958 | Manganese | 7439-96-5 | 321 | | 0.980 | 0.0814 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.345 | J | 1.96 | 0.167 | 1 |
| 06961 | Nickel | 7440-02-0 | 12.6 | | 1.96 | 0.127 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 409 | | 9.80 | 2.83 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,870 | | 98.0 | 8.17 | 1 |
| 01667 | Sodium | 7440-23-5 | 77.3 | J | 98.0 | 16.4 | 1 |
| 06969 | Tin | 7440-31-5 | 2.64 | J | 9.80 | 0.216 | 1 |
| 06970 | Titanium | 7440-32-6 | 1,200 | | 0.980 | 0.167 | 1 |
| 06971 | Vanadium | 7440-62-2 | 43.8 | | 0.980 | 0.127 | 1 |
| 06972 | Zinc | 7440-66-6 | 55.2 | | 3.92 | 0.196 | 1 |
| 10146 | Zirconium | 7440-67-7 | 2.66 | J | 4.90 | 0.823 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.426 | | 0.392 | 0.0980 | 2 |
| 06142 | Silver | 7440-22-4 | 0.0588 | J | 0.196 | 0.0255 | 2 |
| 06144 | Strontium | 7440-24-6 | 16.0 | | 0.392 | 0.0667 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.266 | | 0.196 | 0.0294 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.0359 | | 0.0162 | 0.0097 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-565-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494370**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:35 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56500 SDG#: PH227-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|
| **Wet Chemistry** | **SW-846 9045D modified** | | Std. Units | Std. Units | Std. Units | |
| 00394 | 15a pH by 9045D<br>The pH was measured in water at 23.1 C. | n.a. | 5.96 | 0.0100 | 0.0100 | 1 |
| **Wet Chemistry** | **EPA 160.3 modified** | | % | % | % | |
| 11624 | 14a Moisture Content by 160.3<br>Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 1.9 | 0.10 | 0.10 | 1 |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12969 | 7a SVOC SIM EPA 8270D | SW-846 8270D SIM | 1 | 14169SLA026 | 06/24/2014 02:48 | Mark A Clark | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 2 | 14169SLA026 | 06/19/2014 10:30 | Anna E Stager | 1 |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141690028A | 06/23/2014 11:37 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141690028A | 06/19/2014 09:45 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 23:26 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 23:24 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-565-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7494370**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 09:35 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56500 SDG#: PH227-08

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 06958 | Manganese | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 16:54 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141680637002B | 06/19/2014 07:06 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:06 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:06 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:06 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141680638002 | 06/19/2014 10:34 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141680637002 | 06/18/2014 12:24 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141680638002 | 06/18/2014 14:47 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14162039402A | 06/11/2014 21:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-566-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494371**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:50 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56600 SDG#: PH227-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.1 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 24 | | 17 | 4.4 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 25 | U | 25 | 10 | 5 |
| 12952 | EFH (C15-C20) | n.a. | 23 | J | 25 | 10 | 5 |
| 12952 | EFH (C21-C30) | n.a. | 210 | | 25 | 10 | 5 |
| 12952 | EFH (C30-C40) | n.a. | 400 | | 51 | 20 | 5 |
| 12952 | EFH (C8-C11) | n.a. | 25 | U | 25 | 10 | 5 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.5 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 61 | | 5.1 | 2.0 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 100 | | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.0 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. | | | | | | |
| | The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01643 | Aluminum | 7429-90-5 | 10,500 | | 39.0 | 7.04 | 1 |
| 06944 | Antimony | 7440-36-0 | 3.90 | U | 3.90 | 0.722 | 1 |
| 06935 | Arsenic | 7440-38-2 | 6.31 | | 3.90 | 0.683 | 1 |
| 06946 | Barium | 7440-39-3 | 61.1 | | 0.976 | 0.0322 | 1 |
| 06947 | Beryllium | 7440-41-7 | 0.436 | J | 0.976 | 0.0654 | 1 |
| 07914 | Boron | 7440-42-8 | 4.09 | J | 9.76 | 0.820 | 1 |
| 06949 | Cadmium | 7440-43-9 | 0.976 | U | 0.976 | 0.0742 | 1 |
| 01650 | Calcium | 7440-70-2 | 3,220 | | 19.5 | 3.26 | 1 |
| 06951 | Chromium | 7440-47-3 | 14.2 | | 2.93 | 0.156 | 1 |
| 06952 | Cobalt | 7440-48-4 | 3.66 | | 0.976 | 0.0966 | 1 |
| 06953 | Copper | 7440-50-8 | 7.59 | | 1.95 | 0.283 | 1 |
| 01654 | Iron | 7439-89-6 | 16,600 | | 39.0 | 3.53 | 1 |
| 06955 | Lead | 7439-92-1 | 13.8 | | 2.93 | 0.488 | 1 |
| 01656 | Lithium | 7439-93-2 | 19.2 | | 3.9 | 0.33 | 1 |
| 01657 | Magnesium | 7439-95-4 | 4,040 | | 9.76 | 1.63 | 1 |
| 06958 | Manganese | 7439-96-5 | 230 | | 0.976 | 0.0810 | 1 |
| 06960 | Molybdenum | 7439-98-7 | 0.382 | J | 1.95 | 0.166 | 1 |
| 06961 | Nickel | 7440-02-0 | 8.64 | | 1.95 | 0.127 | 1 |
| 10145 | Phosphorus | 7723-14-0 | 322 | | 9.76 | 2.82 | 1 |
| 01662 | Potassium | 7440-09-7 | 2,840 | | 97.6 | 8.14 | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-566-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494371**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:50 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56600 SDG#: PH227-09

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Metals** | **SW-846 6010C** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 01667 | Sodium | 7440-23-5 | 60.0 | J | 97.6 | 16.3 | 1 |
| 06969 | Tin | 7440-31-5 | 2.34 | J | 9.76 | 0.215 | 1 |
| 06970 | Titanium | 7440-32-6 | 855 | | 0.976 | 0.166 | 1 |
| 06971 | Vanadium | 7440-62-2 | 31.3 | | 0.976 | 0.127 | 1 |
| 06972 | Zinc | 7440-66-6 | 50.4 | | 3.90 | 0.195 | 1 |
| 10146 | Zirconium | 7440-67-7 | 1.86 | J | 4.88 | 0.820 | 1 |
| | **SW-846 6020A** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 06141 | Selenium | 7782-49-2 | 0.324 | J | 0.390 | 0.0976 | 2 |
| 06142 | Silver | 7440-22-4 | 0.571 | | 0.195 | 0.0254 | 2 |
| 06144 | Strontium | 7440-24-6 | 19.4 | | 0.390 | 0.0664 | 2 |
| 06145 | Thallium | 7440-28-0 | 0.243 | | 0.195 | 0.0293 | 2 |
| | **SW-846 7471B** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 00159 | 3a Mercury 7471A | 7439-97-6 | 0.375 | | 0.0165 | 0.0099 | 1 |
| **Wet Chemistry** | **SW-846 9045D modified** | | **Std. Units** | | **Std. Units** | **Std. Units** | |
| 00394 | 15a pH by 9045D | n.a. | 6.19 | | 0.0100 | 0.0100 | 1 |
| | The pH was measured in water at 23.3 C. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 1.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141690028A | 06/23/2014 11:55 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141690028A | 06/19/2014 09:45 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/18/2014 18:32 | Heather E Williams | 5 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/24/2014 04:34 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-566-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7494371**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 08:50 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

56600 SDG#: PH227-09

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 01643 | Aluminum | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06944 | Antimony | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06935 | Arsenic | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06946 | Barium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06947 | Beryllium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 07914 | Boron | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06949 | Cadmium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 01650 | Calcium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06951 | Chromium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06952 | Cobalt | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06953 | Copper | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 01654 | Iron | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06955 | Lead | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 01656 | Lithium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 01657 | Magnesium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06958 | Manganese | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06960 | Molybdenum | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06961 | Nickel | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 10145 | Phosphorus | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 01662 | Potassium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 01667 | Sodium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06969 | Tin | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06970 | Titanium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06971 | Vanadium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06972 | Zinc | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 10146 | Zirconium | SW-846 6010C | 1 | 141680637002 | 06/19/2014 17:06 | Katlin N Cataldi | 1 |
| 06141 | Selenium | SW-846 6020A | 1 | 141680637002B | 06/19/2014 07:13 | Choon Y Tian | 2 |
| 06142 | Silver | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:13 | Choon Y Tian | 2 |
| 06144 | Strontium | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:13 | Choon Y Tian | 2 |
| 06145 | Thallium | SW-846 6020A | 1 | 141680637002A | 06/19/2014 07:13 | Choon Y Tian | 2 |
| 00159 | 3a Mercury 7471A | SW-846 7471B | 1 | 141680638002 | 06/19/2014 10:36 | Damary Valentin | 1 |
| 10637 | SW SW846 (IV)ICP/ICPMS Digest | SW-846 3050B | 1 | 141680637002 | 06/18/2014 12:24 | James L Mertz | 1 |
| 10638 | SW SW846 (IV) Hg Digest | SW-846 7471B | 1 | 141680638002 | 06/18/2014 14:47 | James L Mertz | 1 |
| 00394 | 15a pH by 9045D | SW-846 9045D modified | 1 | 14162039402A | 06/11/2014 21:25 | Luz M Groff | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-576-NBZ-SB-0.0-0.5 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494372**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 12:35 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57600 SDG#: PH227-10

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 33 | U | 33 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 33 | U | 33 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 17 | U | 17 | 5.2 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 17 | U | 17 | 4.1 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 17 | U | 17 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 17 | U | 17 | 3.9 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 17 | U | 17 | 3.3 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 17 | U | 17 | 3.3 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.8 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 18 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 35 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 3.1 | J | 5.1 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.5 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141690028A | 06/23/2014 12:14 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141690028A | 06/19/2014 09:45 | Katheryne V Sponheimer | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-576-NBZ-SB-0.0-0.5 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7494372**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 12:35 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57600 SDG#: PH227-10

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 14:03 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/23/2014 23:54 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-576-NBZ-SB-2.0-3.0 Soil
SSFL Phase 3 NBZ

**LL Sample # SW 7494373**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 13:15 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57623 SDG#: PH227-11

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Volatiles** | **TPH GRO SW-846 8015B mod** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 05551 | 11a TPH by EPA 8015B GRO | n.a. | 1.3 | U | 1.3 | 0.3 | 32.22 |
| **Pesticides/PCBs** | **SW-846 8082A** | | **ug/kg** | | **ug/kg** | **ug/kg** | |
| 13099 | Aroclor 5432 | 63496-31-1 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5442 | 12642-23-8 | 34 | U | 34 | 10 | 1 |
| 13099 | Aroclor 5460 | 11126-42-4 | 34 | U | 34 | 10 | 1 |
| 13099 | PCB-1016 | 12674-11-2 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1221 | 11104-28-2 | 18 | U | 18 | 5.3 | 1 |
| 13099 | PCB-1232 | 11141-16-5 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1242 | 53469-21-9 | 18 | U | 18 | 4.2 | 1 |
| 13099 | PCB-1248 | 12672-29-6 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1254 | 11097-69-1 | 18 | U | 18 | 4.5 | 1 |
| 13099 | PCB-1260 | 11096-82-5 | 18 | U | 18 | 4.0 | 1 |
| 13099 | PCB-1262 | 37324-23-5 | 18 | U | 18 | 3.4 | 1 |
| 13099 | PCB-1268 | 11100-14-4 | 18 | U | 18 | 3.4 | 1 |
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 7.8 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 21 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 10 | U | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.9 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

**Sample Description: FDG2-SL-576-NBZ-SB-2.0-3.0 Soil**
**SSFL Phase 3 NBZ**

**LL Sample # SW 7494373**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 13:15 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

57623 SDG#: PH227-11

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 05551 | 11a TPH by EPA 8015B GRO | TPH GRO SW-846 8015B mod | 1 | 14164A16A | 06/14/2014 02:36 | Marie D Beamenderfer | 32.22 |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 1 | 201416234775 | 06/11/2014 15:46 | Mitchell R Washel | n.a. |
| 06130 | GC - 5 g HL Encore Prep | SW-846 5035A | 2 | 201416234775 | 06/11/2014 15:46 | Mitchell R Washel | n.a. |
| 13099 | 19a PCBs and PCTs 8082A | SW-846 8082A | 1 | 141690028A | 06/23/2014 12:33 | Monica M Souders | 1 |
| 13100 | PCB/PCT Solids Update IV Ext. | SW-846 3546 | 1 | 141690028A | 06/19/2014 09:45 | Katheryne V Sponheimer | 1 |
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 11:55 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/24/2014 00:15 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-613-SA5D-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7494374**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 13:25 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61300 SDG#: PH227-12

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 9.1 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 48 | | 5.2 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 82 | | 10 | 4.2 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 2.1 | J | 5.2 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.2 | J | 5.2 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 4.2 | J | 10 | 4.2 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.2 | U | 5.2 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 3.7 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 23:48 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/24/2014 00:58 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

**Sample Description:** FDG2-SL-614-SA5D-SB-0.0-0.5 Soil
SSFL Phase 3 Subarea 5D

**LL Sample # SW 7494375**
**LL Group # 1480926**
**Account # 13013**

**Project Name: SSFL Phase 3 Sampling**

Collected: 06/10/2014 12:45 by RR

Submitted: 06/11/2014 09:15
Reported: 07/07/2014 12:21

CDM Federal Programs Corp.
3201 Jermantown Road
Suite 400
Fairfax VA 22030

61400 SDG#: PH227-13*

| CAT No. | Analysis Name | CAS Number | Dry Result | | Dry Limit of Quantitation* | Dry Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **SW-846 8015B modified** | | **mg/kg** | | **mg/kg** | **mg/kg** | |
| 12952 | EFH (C12-C14) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 12952 | EFH (C15-C20) | n.a. | 2.1 | J | 5.1 | 2.1 | 1 |
| 12952 | EFH (C21-C30) | n.a. | 14 | | 5.1 | 2.1 | 1 |
| 12952 | EFH (C30-C40) | n.a. | 36 | | 10 | 4.1 | 1 |
| 12952 | EFH (C8-C11) | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C12-C14 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C15-C20 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| 13197 | EFH C21-C30 w/ SiGel | n.a. | 2.8 | J | 5.1 | 2.1 | 1 |
| 13197 | EFH C30-C40 w/ SiGel | n.a. | 8.2 | J | 10 | 4.1 | 1 |
| 13197 | EFH C8-C11 w/ SiGel | n.a. | 5.1 | U | 5.1 | 2.1 | 1 |
| | The reverse surrogate, capric acid, is present at <1%. The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits. | | | | | | |
| **Wet Chemistry** | **EPA 160.3 modified** | | **%** | | **%** | **%** | |
| 11624 | 14a Moisture Content by 160.3 | n.a. | 2.6 | | 0.10 | 0.10 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | | |

## General Sample Comments

CA ELAP Lab Certification No. 2792; CA NELAP Lab Certification No. 10276CA

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 12952 | 10a TPH by EPA 8015B (DRO) | SW-846 8015B modified | 1 | 141640001A | 06/17/2014 12:16 | Heather E Williams | 1 |
| 13197 | 37a TPH-EFH w/Si Gel | SW-846 8015B modified | 1 | 141680008A | 06/24/2014 01:20 | Heather E Williams | 1 |
| 13204 | EFH Microwave Ext. w/SiGel | SW-846 3546 | 1 | 141680008A | 06/17/2014 16:45 | JoElla L Rice | 1 |
| 12959 | EFH soil ext.(microwave) | SW-846 3546 | 1 | 141640001A | 06/13/2014 18:00 | Sally L Appleyard | 1 |
| 11624 | 14a Moisture Content by 160.3 | EPA 160.3 modified | 1 | 14169162401B | 06/18/2014 20:08 | Scott W Freisher | 1 |

*=This limit was used in the evaluation of the final result

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14163SLB026 | Sample number(s): 7494369 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 94 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 96 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 102 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 88 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 99 | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 101 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 97 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 96 | | 85-122 | | |
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 89 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 99 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 95 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 97 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 94 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 68* | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 90 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 93 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 89 | | 80-119 | | |
| Batch number: 14169SLA026 | Sample number(s): 7494370 | | | | | | | | | |
| Acenaphthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 111 | | 84-118 | | |
| Acenaphthylene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 78-120 | | |
| Anthracene | 1.7 | U | 1.7 | 0.33 | ug/kg | 105 | | 85-118 | | |
| Benzo(a)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 113 | | 83-119 | | |
| Benzo(a)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 80-122 | | |
| Benzo(b)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 112 | | 82-135 | | |
| Benzo(e)pyrene | 17 | U | 17. | 3.3 | ug/kg | 97 | | 81-110 | | |
| Benzo(g,h,i)perylene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 79-121 | | |
| Benzo(k)fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 79-123 | | |
| Butylbenzylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-144 | | |
| Di-n-butylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 75-148 | | |
| Chrysene | 1.7 | U | 1.7 | 0.33 | ug/kg | 114* | | 84-113 | | |
| Dibenz(a,h)anthracene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 83-123 | | |
| Diethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 73-147 | | |
| Dimethylphthalate | 18 | U | 18. | 6.0 | ug/kg | 107 | | 85-122 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bis(2-Ethylhexyl)phthalate | 18 | U | 18. | 6.0 | ug/kg | 101 | | 68-146 | | |
| Fluoranthene | 1.7 | U | 1.7 | 0.67 | ug/kg | 114 | | 85-116 | | |
| Fluorene | 1.7 | U | 1.7 | 0.67 | ug/kg | 115 | | 84-120 | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 100 | | 82-123 | | |
| 1-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 106 | | 78-119 | | |
| 2-Methylnaphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 108 | | 78-121 | | |
| Naphthalene | 1.7 | U | 1.7 | 0.67 | ug/kg | 104 | | 79-113 | | |
| N-Nitrosodimethylamine | 1.7 | U | 1.7 | 0.67 | ug/kg | 109 | | 71-124 | | |
| Di-n-octylphthalate | 18 | U | 18. | 6.0 | ug/kg | 100 | | 71-148 | | |
| Phenanthrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 105 | | 83-113 | | |
| Pyrene | 1.7 | U | 1.7 | 0.67 | ug/kg | 103 | | 80-119 | | |
| Batch number: 14164A16A | Sample number(s): 7494363-7494367,7494373 | | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 1.0 | U | 1.0 | 0.2 | mg/kg | 77 | | 67-120 | | |
| Batch number: 14167A94A | Sample number(s): 7494361 | | | | | | | | | |
| TPH-GRO S.CA water C5-C12 | 50 | U | 50. | 20 | ug/l | 98 | 103 | 80-133 | 5 | 30 |
| Batch number: 141690028A | Sample number(s): 7494369-7494373 | | | | | | | | | |
| Aroclor 5432 | 33 | U | 33. | 10 | ug/kg | | | | | |
| Aroclor 5442 | 33 | U | 33. | 10 | ug/kg | 82 | 83 | 36-106 | 0 | 30 |
| Aroclor 5460 | 33 | U | 33. | 10 | ug/kg | | | | | |
| PCB-1016 | 17 | U | 17. | 3.3 | ug/kg | 100 | | 82-116 | | |
| PCB-1221 | 17 | U | 17. | 5.1 | ug/kg | | | | | |
| PCB-1232 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1242 | 17 | U | 17. | 4.1 | ug/kg | | | | | |
| PCB-1248 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1254 | 17 | U | 17. | 4.4 | ug/kg | | | | | |
| PCB-1260 | 17 | U | 17. | 3.9 | ug/kg | 105 | | 84-125 | | |
| PCB-1262 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| PCB-1268 | 17 | U | 17. | 3.3 | ug/kg | | | | | |
| Batch number: 141640001A | Sample number(s): 7494362-7494375 | | | | | | | | | |
| EFH (C12-C14) | 5.0 | U | 5.0 | 2.0 | mg/kg | 93 | | 76-115 | | |
| EFH (C15-C20) | 5.0 | U | 5.0 | 2.0 | mg/kg | 96 | | 78-127 | | |
| EFH (C21-C30) | 5.0 | U | 5.0 | 2.0 | mg/kg | 98 | | 77-127 | | |
| EFH (C30-C40) | 10 | U | 10. | 4.0 | mg/kg | 86 | | 44-134 | | |
| EFH (C8-C11) | 5.0 | U | 5.0 | 2.0 | mg/kg | 76 | | 60-115 | | |
| Batch number: 141680008A | Sample number(s): 7494362-7494375 | | | | | | | | | |
| EFH C12-C14 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 71* | | 76-115 | | |
| EFH C15-C20 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 75* | | 78-127 | | |
| EFH C21-C30 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 76* | | 77-127 | | |
| EFH C30-C40 w/ SiGel | 10 | U | 10. | 4.0 | mg/kg | 62 | | 44-134 | | |
| EFH C8-C11 w/ SiGel | 5.0 | U | 5.0 | 2.0 | mg/kg | 53* | | 60-115 | | |
| Batch number: 141680637002 | Sample number(s): 7494369-7494371 | | | | | | | | | |
| Aluminum | 10.0 | J | 40.0 | 7.21 | mg/kg | 107 | | 80-120 | | |
| Antimony | 4.00 | U | 4.00 | 0.740 | mg/kg | 105 | | 80-120 | | |
| Arsenic | 4.00 | U | 4.00 | 0.700 | mg/kg | 105 | | 80-120 | | |
| Barium | 1.00 | U | 1.00 | 0.0330 | mg/kg | 102 | | 80-120 | | |
| Beryllium | 1.00 | U | 1.00 | 0.0670 | mg/kg | 102 | | 80-120 | | |
| Boron | 1.76 | J | 10.0 | 0.840 | mg/kg | 99 | | 80-120 | | |
| Cadmium | 1.00 | U | 1.00 | 0.0760 | mg/kg | 103 | | 80-120 | | |
| Calcium | 24.6 | | 20.0 | 3.34 | mg/kg | 105 | | 80-120 | | |
| Chromium | 3.00 | U | 3.00 | 0.160 | mg/kg | 103 | | 80-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

| Analysis Name | Blank Result | | Blank LOQ** | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 1.00 | U | 1.00 | 0.0990 | mg/kg | 105 | | 80-120 | | |
| Copper | 2.00 | U | 2.00 | 0.290 | mg/kg | 103 | | 80-120 | | |
| Iron | 40.0 | U | 40.0 | 3.62 | mg/kg | 104 | | 80-120 | | |
| Lead | 3.00 | U | 3.00 | 0.500 | mg/kg | 108 | | 80-120 | | |
| Lithium | 4.0 | U | 4.0 | 0.34 | mg/kg | 101 | | 80-120 | | |
| Magnesium | 10.0 | U | 10.0 | 1.67 | mg/kg | 103 | | 80-120 | | |
| Manganese | 1.00 | U | 1.00 | 0.0830 | mg/kg | 102 | | 80-120 | | |
| Molybdenum | 2.00 | U | 2.00 | 0.170 | mg/kg | 102 | | 80-120 | | |
| Nickel | 2.00 | U | 2.00 | 0.130 | mg/kg | 108 | | 80-120 | | |
| Phosphorus | 10.0 | U | 10.0 | 2.89 | mg/kg | 104 | | 80-120 | | |
| Potassium | 100 U | | 100. | 8.34 | mg/kg | 99 | | 80-120 | | |
| Sodium | 100 U | | 100. | 16.7 | mg/kg | 101 | | 80-120 | | |
| Tin | 1.46 | J | 10.0 | 0.220 | mg/kg | 101 | | 80-120 | | |
| Titanium | 1.00 | U | 1.00 | 0.170 | mg/kg | 104 | | 80-120 | | |
| Vanadium | 1.00 | U | 1.00 | 0.130 | mg/kg | 104 | | 80-120 | | |
| Zinc | 0.386 | J | 4.00 | 0.200 | mg/kg | 103 | | 80-120 | | |
| Zirconium | 5.00 | U | 5.00 | 0.840 | mg/kg | 102 | | 80-120 | | |
| Batch number: 141680637002A | Sample number(s): 7494369-7494371 | | | | | | | | | |
| Silver | 0.200 | U | 0.200 | 0.0260 | mg/kg | 103 | | 80-120 | | |
| Strontium | 0.134 | J | 0.400 | 0.0680 | mg/kg | 100 | | 80-120 | | |
| Thallium | 0.200 | U | 0.200 | 0.0300 | mg/kg | 102 | | 80-120 | | |
| Batch number: 141680637002B | Sample number(s): 7494369-7494371 | | | | | | | | | |
| Selenium | 0.400 | U | 0.400 | 0.100 | mg/kg | 103 | | 80-120 | | |
| Batch number: 141680638002 | Sample number(s): 7494369-7494371 | | | | | | | | | |
| 3a Mercury 7471A | 0.0167 | U | 0.0167 | 0.0100 | mg/kg | 85 | | 85-120 | | |
| Batch number: 14162039402A | Sample number(s): 7494369-7494371 | | | | | | | | | |
| 15a pH by 9045D | | | | | | 100 | | 95-105 | | |
| Batch number: 14169162401B | Sample number(s): 7494362-7494375 | | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |
| 14a Moisture Content by 160.3 | | | | | | 100 | | 80-120 | | |

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 14163SLB026 | Sample number(s): 7494369 UNSPK: P492863 | | | | | | | | |
| Acenaphthene | 88 | 80 | 48-127 | 10 | 30 | | | | |
| Acenaphthylene | 82 | 75 | 60-128 | 10 | 30 | | | | |
| Anthracene | 83 | 75 | 52-126 | 11 | 30 | | | | |
| Benzo(a)anthracene | 86 | 79 | 44-143 | 8 | 30 | | | | |
| Benzo(a)pyrene | 82 | 74 | 49-137 | 10 | 30 | | | | |
| Benzo(b)fluoranthene | 105 | 95 | 26-142 | 10 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(e)pyrene | 84 | 77 | 63-111 | 9 | 30 | | | | |
| Benzo(g,h,i)perylene | 42 | 38 | 33-141 | 11 | 30 | | | | |
| Benzo(k)fluoranthene | 102 | 97 | 49-144 | 4 | 30 | | | | |
| Butylbenzylphthalate | 101 | 81 | 64-156 | 18 | 30 | | | | |
| Di-n-butylphthalate | 87 | 81 | 52-147 | 7 | 30 | | | | |
| Chrysene | 88 | 80 | 43-141 | 9 | 30 | | | | |
| Dibenz(a,h)anthracene | 51 | 46 | 25-145 | 9 | 30 | | | | |
| Diethylphthalate | 87 | 79 | 66-140 | 9 | 30 | | | | |
| Dimethylphthalate | 86 | 78 | 70-123 | 10 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 51 | 64 | 48-164 | 11 | 30 | | | | |
| Fluoranthene | 89 | 82 | 38-153 | 8 | 30 | | | | |
| Fluorene | 89 | 82 | 57-130 | 9 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 49 | 44 | 26-139 | 10 | 30 | | | | |
| 1-Methylnaphthalene | 85 | 77 | 59-139 | 9 | 30 | | | | |
| 2-Methylnaphthalene | 87 | 79 | 46-147 | 10 | 30 | | | | |
| Naphthalene | 86 | 78 | 52-136 | 9 | 30 | | | | |
| N-Nitrosodimethylamine | 61 | 55 | 39-134 | 10 | 30 | | | | |
| Di-n-octylphthalate | 115 | 109 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 85 | 77 | 50-137 | 10 | 30 | | | | |
| Pyrene | 75 | 69 | 26-143 | 8 | 30 | | | | |
| Batch number: 14169SLA026 | Sample number(s): 7494370 UNSPK: P501188 | | | | | | | | |
| Acenaphthene | 90 | 91 | 48-127 | 3 | 30 | | | | |
| Acenaphthylene | 90 | 90 | 60-128 | 1 | 30 | | | | |
| Anthracene | 92 | 93 | 52-126 | 2 | 30 | | | | |
| Benzo(a)anthracene | 98 | 103 | 44-143 | 7 | 30 | | | | |
| Benzo(a)pyrene | 86 | 88 | 49-137 | 3 | 30 | | | | |
| Benzo(b)fluoranthene | 112 | 121 | 26-142 | 8 | 30 | | | | |
| Benzo(e)pyrene | 87 | 89 | 63-111 | 4 | 30 | | | | |
| Benzo(g,h,i)perylene | 47 | 43 | 33-141 | 8 | 30 | | | | |
| Benzo(k)fluoranthene | 96 | 98 | 49-144 | 3 | 30 | | | | |
| Butylbenzylphthalate | 95 | 92 | 64-156 | 3 | 30 | | | | |
| Di-n-butylphthalate | 91 | 91 | 52-147 | 1 | 30 | | | | |
| Chrysene | 94 | 104 | 43-141 | 11 | 30 | | | | |
| Dibenz(a,h)anthracene | 57 | 54 | 25-145 | 5 | 30 | | | | |
| Diethylphthalate | 89 | 90 | 66-140 | 2 | 30 | | | | |
| Dimethylphthalate | 89 | 89 | 70-123 | 1 | 30 | | | | |
| Bis(2-Ethylhexyl)phthalate | 96 | 408* | 48-164 | 125* | 30 | | | | |
| Fluoranthene | 103 | 129 | 38-153 | 23 | 30 | | | | |
| Fluorene | 93 | 94 | 57-130 | 3 | 30 | | | | |
| Indeno(1,2,3-cd)pyrene | 54 | 51 | 26-139 | 5 | 30 | | | | |
| 1-Methylnaphthalene | 90 | 91 | 59-139 | 2 | 30 | | | | |
| 2-Methylnaphthalene | 92 | 94 | 46-147 | 4 | 30 | | | | |
| Naphthalene | 88 | 90 | 52-136 | 4 | 30 | | | | |
| N-Nitrosodimethylamine | 86 | 91 | 39-134 | 7 | 30 | | | | |
| Di-n-octylphthalate | 126 | 132 | 52-162 | 6 | 30 | | | | |
| Phenanthrene | 92 | 106 | 50-137 | 15 | 30 | | | | |
| Pyrene | 88 | 109 | 26-143 | 23 | 30 | | | | |
| Batch number: 14164A16A | Sample number(s): 7494363-7494367,7494373 UNSPK: 7494363 | | | | | | | | |
| 11a TPH by EPA 8015B GRO | 80 | 80 | 69-123 | 6 | 30 | | | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141690028A | Sample number(s): 7494369-7494373 UNSPK: 7494369 | | | | | | | | |
| PCB-1016 | 96 | 78 | 41-135 | 22 | 50 | | | | |
| PCB-1260 | 102 | 83 | 40-134 | 22 | 50 | | | | |
| Batch number: 141640001A | Sample number(s): 7494362-7494375 UNSPK: 7494363 | | | | | | | | |
| EFH (C12-C14) | 103 | 89 | 49-123 | 15 | 20 | | | | |
| EFH (C15-C20) | 105 | 126* | 49-123 | 13 | 20 | | | | |
| EFH (C21-C30) | 118 | 217* | 49-123 | 28* | 20 | | | | |
| EFH (C30-C40) | 109 | 218* | 49-123 | 26* | 20 | | | | |
| EFH (C8-C11) | 100 | 84 | 49-123 | 18 | 20 | | | | |
| Batch number: 141680008A | Sample number(s): 7494362-7494375 UNSPK: 7494363 | | | | | | | | |
| EFH C12-C14 w/ SiGel | 75 | 72 | 49-123 | 3 | 20 | | | | |
| EFH C15-C20 w/ SiGel | 82 | 89 | 49-123 | 8 | 20 | | | | |
| EFH C21-C30 w/ SiGel | 46* | 110 | 49-123 | 36* | 20 | | | | |
| EFH C30-C40 w/ SiGel | 47* | 106 | 49-123 | 36* | 20 | | | | |
| EFH C8-C11 w/ SiGel | 59 | 56 | 49-123 | 4 | 20 | | | | |
| Batch number: 141680637002 | Sample number(s): 7494369-7494371 UNSPK: P501188 BKG: P501188 | | | | | | | | |
| Aluminum | 1032 (2) | 806 (2) | 75-125 | 3 | 20 | 15,000 | 15,000 | 0 | 20 |
| Antimony | 47* | 49* | 75-125 | 3 | 20 | 3.92 U | 3.96 U | 0 (1) | 20 |
| Arsenic | 98 | 98 | 75-125 | 1 | 20 | 5.68 | 5.34 | 6 (1) | 20 |
| Barium | 94 | 88 | 75-125 | 5 | 20 | 104 | 107 | 3 | 20 |
| Beryllium | 102 | 102 | 75-125 | 2 | 20 | 0.566 J | 0.570 J | 1 (1) | 20 |
| Boron | 98 | 97 | 75-125 | 2 | 20 | 4.31 J | 4.09 J | 5 (1) | 20 |
| Cadmium | 93 | 93 | 75-125 | 2 | 20 | 0.980 U | 0.990 U | 0 (1) | 20 |
| Calcium | 150 (2) | 103 (2) | 75-125 | 7 | 20 | 2,210 | 2,360 | 7 | 20 |
| Chromium | 112 | 94 | 75-125 | 10 | 20 | 19.0 | 20.0 | 5 | 20 |
| Cobalt | 95 | 95 | 75-125 | 2 | 20 | 4.78 | 4.98 | 4 (1) | 20 |
| Copper | 102 | 95 | 75-125 | 7 | 20 | 11.5 | 11.7 | 1 | 20 |
| Iron | -493 (2) | -449 (2) | 75-125 | 0 | 20 | 18,800 | 18,800 | 0 | 20 |
| Lead | 132* | 84 | 75-125 | 28* | 20 | 10.4 | 7.96 | 26* (1) | 20 |
| Lithium | 103 | 108 | 75-125 | 2 | 20 | 20.1 | 18.9 | 6 (1) | 20 |
| Magnesium | 95 (2) | 21 (2) | 75-125 | 4 | 20 | 4,030 | 4,040 | 0 | 20 |
| Manganese | 73 (2) | 41 (2) | 75-125 | 5 | 20 | 313 | 332 | 6 | 20 |
| Molybdenum | 95 | 95 | 75-125 | 2 | 20 | 0.404 J | 0.410 J | 1 (1) | 20 |
| Nickel | 97 | 94 | 75-125 | 4 | 20 | 12.8 | 12.4 | 3 | 20 |
| Phosphorus | 92 (2) | 151 (2) | 75-125 | 10 | 20 | 424 | 434 | 2 | 20 |
| Potassium | 124 | 122 | 75-125 | 1 | 20 | 3,560 | 3,680 | 3 | 20 |
| Sodium | 103 | 105 | 75-125 | 0 | 20 | 76.0 J | 72.5 J | 5 (1) | 20 |
| Tin | 89 | 89 | 75-125 | 2 | 20 | 2.54 J | 2.52 J | 1 (1) | 20 |
| Titanium | 244 (2) | 196 (2) | 75-125 | 4 | 20 | 1,040 | 1,040 | 0 | 20 |
| Vanadium | 102 | 96 | 75-125 | 4 | 20 | 35.0 | 33.9 | 3 | 20 |
| Zinc | 95 | 93 | 75-125 | 2 | 20 | 57.1 | 56.0 | 2 | 20 |
| Zirconium | 97 | 99 | 75-125 | 0 | 20 | 2.95 J | 3.36 J | 13 (1) | 20 |
| Batch number: 141680637002A | Sample number(s): 7494369-7494371 UNSPK: P501188 BKG: P501188 | | | | | | | | |
| Silver | 128* | 128* | 75-125 | 2 | 20 | 0.0414 J | 0.0323 J | 25* (1) | 20 |
| Strontium | 148* | 71* | 75-125 | 21* | 20 | 22.0 | 23.1 | 5 | 20 |
| Thallium | 125 | 115 | 75-125 | 6 | 20 | 0.266 | 0.255 | 4 (1) | 20 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: 141680637002B | Sample number(s): 7494369-7494371 UNSPK: P501188 BKG: P501188 | | | | | | | | |
| Selenium | 116 | 116 | 75-125 | 1 | 20 | 0.265 J | 0.259 J | 2 (1) | 20 |
| Batch number: 141680638002 | Sample number(s): 7494369-7494371 UNSPK: P501188 BKG: P501188 | | | | | | | | |
| 3a Mercury 7471A | 89 | 86 | 65-135 | 1 | 20 | 0.0200 | 0.0182 | 10 (1) | 20 |
| Batch number: 14162039402A | Sample number(s): 7494369-7494371 BKG: 7494369 | | | | | | | | |
| 15a pH by 9045D | | | | | | 5.92 | 5.94 | 0 | 3 |
| Batch number: 14169162401B | Sample number(s): 7494362-7494375 BKG: 7494363 | | | | | | | | |
| 14a Moisture Content by 160.3 | | | | | | 8.5 | 8.5 | 0 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 8.5 | 8.5 | 0 | 20 |
| 14a Moisture Content by 160.3 | | | | | | 8.5 | 8.5 | 0 | 20 |

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14163SLB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7494369 | 90 | 85 | 84 |
| Blank | 94 | 101 | 87 |
| LCS | 100 | 106 | 92 |
| MS | 90 | 97 | 85 |
| MSD | 82 | 91 | 77 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 7a SVOC SIM EPA 8270D
Batch number: 14169SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7494370 | 100 | 105 | 79 |
| Blank | 103 | 107 | 90 |
| LCS | 104 | 109 | 94 |
| MS | 100 | 100 | 86 |
| MSD | 93 | 94 | 83 |
| Limits: | 59-115 | 61-118 | 70-127 |

Analysis Name: 11a TPH by EPA 8015B GRO
Batch number: 14164A16A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

## Surrogate Quality Control

| | Trifluorotoluene-F |
|---|---|
| 7494363 | 92 |
| 7494364 | 81 |
| 7494365 | 75 |
| 7494366 | 82 |
| 7494367 | 85 |
| 7494373 | 70 |
| Blank | 101 |
| LCS | 94 |
| MS | 81 |
| MSD | 75 |
| Limits: | 50-142 |

Analysis Name: 11b TPH by EPA 8015B GRO
Batch number: 14167A94A

| | Trifluorotoluene-F |
|---|---|
| 7494361 | 84 |
| Blank | 85 |
| LCS | 93 |
| LCSD | 91 |
| Limits: | 63-135 |

Analysis Name: 19a PCBs and PCTs 8082A
Batch number: 141690028A

| | Tetrachloro-m-xylene | Decachlorobiphenyl |
|---|---|---|
| 7494369 | 95 | 86 |
| 7494370 | 91 | 82 |
| 7494371 | 76 | 67 |
| 7494372 | 86 | 81 |
| 7494373 | 92 | 82 |
| Blank | 66 | 62 |
| LCS | 104 | 95 |
| LCSD | 99 | 91 |
| MS | 107 | 101 |
| MSD | 81 | 75 |
| Limits: | 45-120 | 45-120 |

Analysis Name: 10a TPH by EPA 8015B (DRO)
Batch number: 141640001A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7494362 | 85 | 82 |
| 7494363 | 94 | 91 |
| 7494364 | 97 | 95 |
| 7494365 | 92 | 84 |
| 7494366 | 84 | 89 |
| 7494367 | 87 | 91 |
| 7494368 | 93 | 91 |
| 7494369 | 97 | 95 |
| 7494370 | 94 | 92 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

# Quality Control Summary

Client Name: CDM Federal Programs Corp. Group Number: 1480926
Reported: 07/07/14 at 12:21 PM

## Surrogate Quality Control

| | | |
|---|---|---|
| 7494371 | 115 | 110 |
| 7494372 | 92 | 96 |
| 7494373 | 87 | 89 |
| 7494374 | 97 | 96 |
| 7494375 | 93 | 91 |
| Blank | 95 | 101 |
| LCS | 92 | 91 |
| MS | 97 | 95 |
| MSD | 92 | 84 |
| Limits: | 37-125 | 66-123 |

Analysis Name: 37a TPH-EFH w/Si Gel
Batch number: 141680008A

| | Chlorobenzene | Orthoterphenyl |
|---|---|---|
| 7494362 | 59 | 74 |
| 7494363 | 55 | 72 |
| 7494364 | 65 | 76 |
| 7494365 | 64 | 74 |
| 7494366 | 56 | 73 |
| 7494367 | 59 | 73 |
| 7494368 | 61 | 78 |
| 7494369 | 47 | 75 |
| 7494370 | 56 | 76 |
| 7494371 | 71 | 87 |
| 7494372 | 59 | 74 |
| 7494373 | 61 | 75 |
| 7494374 | 54 | 72 |
| 7494375 | 52 | 72 |
| Blank | 39 | 75 |
| LCS | 62 | 73 |
| MS | 65 | 76 |
| MSD | 64 | 74 |
| Limits: | 37-125 | 66-123 |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

13013 1480926 7494361-75

# SSFL Phase 3 Chain of Custody

**CDM Smith**

DateShipped: 6/10/2014
CarrierName: FedEx
AirbillNo: 770258229814

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No: 20140610-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

| Sample | Date/ Time | Matrix | Preserv. | Type/No of Containers | Turn Around Time | Metals 6010 and 6020 | Mercury 7471 (Soil) | Mercury 7470 (Water) | Fluoride 300.0/9056 | SVOC 8270 | TIC 8270 | PAHs 8270 SIM | 1,4 Dioxane 8270 SIM | Dioxins 1613 | PCBs/PCTs 8082 | Perchlorate Confirm 6850/6860 | Perchlorate 314.0/331 | pH 9045 (Soil) | pH 9040 (Water) | Hex Cr 7196/7199 | Herbicides 8151 | Pesticides 8081 | VOCs 8260 | 1,4 Dioxane 8260 SIM | TPH-GRO 8015 | TPH-EFH 8015 | Glycols 8015 | Alcohols 8015 | Terphenyls 8015 | Nitrates 300.0/9056 | Energetics 8330 | Cyanide 9012 | Formaldehyde 8315 | NDMA 1625 | Organotin | Methyl Mercury 1630 | Mercury Speciation 3200 | Calc Nitrate, Nitrite, TKN | TOC SM 5310B | Grain Size ASTM 2488-09a | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB1-061014 | 6/10/14 08:00 | WQ | HCl | 3 - 40 mL Vial | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-630-SA8-SB-0.0-0.5 | 6/10/14 07:55 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-630-SA8-SB-4.0-5.0MS | 6/10/14 08:30 | SO | None | 2 - 16 oz glass | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | MS/MSD |
| FDG2-SL-630-SA8-SB-4.0-5.0MS | 6/10/14 08:30 | SO | None | 6 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | MS/MSD |
| FDG2-SL-930-SA8-SB-4.0-5.0 | 6/10/14 08:40 | SO | None | 2 - 8 oz glass | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-930-SA8-SB-4.0-5.0 | 6/10/14 08:40 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-630-SA8-SB-7.0-8.0 | 6/10/14 09:05 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-630-SA8-SB-7.0-8.0 | 6/10/14 09:05 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-612-SA5D-SB-0.0-0.5 | 6/10/14 11:00 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-564-NBZ-SB-0.0-0.5 | 6/10/14 10:05 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-564-NBZ-SB-0.0-0.5 | 6/10/14 10:05 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-565-NBZ-SB-0.0-0.5 | 6/10/14 09:35 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | X | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-565-NBZ-SB-0.0-0.5 | 6/10/14 09:35 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-566-NBZ-SB-0.0-0.5 | 6/10/14 08:50 | SO | None | 2 - SS-Sleeve | 10 day | X | X | | | | | | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-566-NBZ-SB-0.0-0.5 | 6/10/14 08:50 | SO | None | 1 - 4 oz glass | 10 day | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| FDG2-SL-576-NBZ-SB-0.0-0.5 | 6/10/14 12:35 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-576-NBZ-SB-2.0-3.0 | 6/10/14 13:15 | SO | None | 2 - 8 oz glass | 10 day | | | | | | | | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-576-NBZ-SB-2.0-3.0 | 6/10/14 13:15 | SO | None | 2 - Encore | 10 day | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-613-SA5D-SB-0.0-0.5 | 6/10/14 13:25 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| FDG2-SL-614-SA5D-SB-0.0-0.5 | 6/10/14 12:45 | SO | None | 1 - SS-Sleeve | 10 day | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |

Final Data Gap Block 2 1 of 1

Rec by Brandy Warn ELLE 6.11.14 915